

Title 246 WAC

HEALTH, DEPARTMENT OF

Chapters

	AGENCY DESCRIPTION	246-220		RADIATION
246-01	Description and organization.	246-221		Radiation protection—General provisions.
246-03	State Environmental Policy Act—Guidelines.	246-222		Radiation protection standards.
		246-224		Radiation protection—Worker rights.
246-08	Practice and procedure.			Radiation protection—Radiation machine assembly and registration.
246-10	Administrative procedure—Adjudicative proceedings.	246-225		Radiation protection—X-rays in the healing arts.
246-11	Model procedural rules for boards.	246-227		Radiation protection—Industrial x-ray.
246-12	Administrative procedures and requirements for credentialed health care providers.	246-228		Radiation protection—Analytical x-ray equipment.
		246-229		Radiation protection—Particle accelerators.
246-14	Uniform procedures for complaint resolution.	246-231		Packaging and transportation of radioactive material.
246-15	Whistleblower complaints in health care settings.	246-232		Radioactive material—Licensing applicability.
246-25	Antitrust immunity and competitive oversight.	246-233		Radioactive materials—General licenses.
		246-235		Radioactive materials—Specific licenses.
246-50	Coordinated quality improvement program.	246-239		Radiation protection—Nuclear medicine.
		246-240		Radiation protection—Medical therapy.
		246-243		Radiation protection—Industrial radiography.
	COMMUNICABLE DISEASES	246-244		Radiation protection—Wireline services.
246-100	Communicable and certain other diseases.	246-246		Radioactive criteria for license termination.
246-101	Notifiable conditions.			Radiation protection—Air emissions.
246-102	Cancer registry.	246-247		Radioactive waste—Use of the commercial disposal site.
246-110	Contagious disease—School districts and day care centers.	246-249		Radioactive waste—Licensing land disposal.
		246-250		Radiation protection—Uranium and/or thorium milling.
		246-252		Radiation protection—Fees.
		246-254		
	HUMAN IMMUNODEFICIENCY VIRUS (HIV)			RECREATIONAL WATER
246-130	Human immunodeficiency virus (HIV) infection interventions.			Water recreation facilities.
246-136	Human immunodeficiency virus (HIV) infection—Occupational exposure notification.	246-260		Recreational water contact facilities.
246-138	Testing of good samaritans for certain infectious diseases.	246-262		
246-145	Electrology and tattooing standards for sterilization procedures and infection control.	246-270		SEWER SYSTEMS
		246-271		Sewer systems—Certification of necessity for water district involvement.
		246-272		Public sewage.
246-170	TUBERCULOSIS	246-273		On-site sewage systems.
	Tuberculosis—Prevention, treatment, and control.			On-site sewage system additives.
		246-280		
	ENVIRONMENTAL HEALTH	246-282		SHELLFISH
246-203	General sanitation.			Recreational shellfish beaches.
246-205	Decontamination of illegal drug manufacturing or storage sites.	246-290		Sanitary control of shellfish.
		246-291		
		246-292		WATER SYSTEMS
246-215	FOOD HANDLING	246-293		Public water supplies.
246-217	Food service.	246-294		Group B public water systems.
	Food worker cards.			Water works operator certification.
				Water System Coordination Act.
				Drinking water operating permits.

246-295	Satellite system management agencies.		
246-296	Drinking water state revolving fund loan program.		
FACILITY STANDARDS AND LICENSING			
246-305	Certification of independent review organizations.	246-800	General provisions—Professionals.
246-310	Certificate of need.	246-802	Acupuncturists.
246-312	Acquisition of nonprofit hospitals.	246-808	Chiropractic quality assurance commission.
246-314	Facility construction review.	246-809	Licensure for mental health counselors, marriage and family therapists, and social workers.
246-320	Hospital licensing regulations.	246-810	Counselors.
246-322	Private psychiatric and alcoholism hospitals.	246-811	Chemical dependency professionals.
246-323	Residential treatment facilities for psychiatrically impaired children and youth.	246-812	Board of denture technology.
246-324	Private alcohol and chemical dependency hospitals.	246-814	Access to dental care for children.
246-325	Adult residential rehabilitation centers and private adult treatment homes.	246-815	Dental hygienists.
246-326	Alcoholism treatment facilities.	246-817	Dental quality assurance commission.
246-329	Childbirth centers.	246-822	Dieticians or nutritionists.
246-335	In-home services agencies.	246-824	Dispensing opticians.
246-338	Medical test site rules.	246-826	Health care assistants.
246-358	Temporary worker housing.	246-828	Hearing and speech.
246-359	Temporary worker housing construction standard.	246-830	Massage practitioners.
246-360	Transient accommodations.	246-834	Midwives.
246-361	Cherry harvest camps.	246-836	Naturopathic physicians.
246-366	Primary and secondary schools.	246-840	Practical and registered nursing.
246-374	Outdoor music festivals.	246-841	Nursing assistants.
246-376	Camps.	246-842	Nursing assistants—Nursing homes—Nursing assistants training program.
246-380	State institutional survey program.	246-843	Nursing home administrators.
246-390	Drinking water certification rules.	246-845	Nursing pool.
HEALTH INFORMATION			
246-451	Hospitals—Assessments and related reports.	246-847	Occupational therapists.
246-453	Hospital charity care.	246-849	Ocularists.
246-454	Hospitals—System of accounting, financial reporting, budgeting, cost allocation.	246-850	Orthotics and prosthetics rules.
246-455	Hospital patient discharge information reporting.	246-851	Optometrists.
246-490	Vital statistics.	246-852	Consumer access to vision care.
246-491	Vital statistics—Certificates.	246-853	Osteopathic physicians and surgeons.
HEALTH PROMOTION AND CHRONIC DISEASE PREVENTION			
246-560	Rural health system project.	246-854	Osteopathic physicians' assistants.
246-562	Physician visa waivers.	246-855	Osteopathic physicians' acupuncture assistants.
LABORATORY			
246-650	Newborn screening.	246-856	Board of pharmacy—General.
246-680	Prenatal tests—Congenital and heritable disorders.	246-858	Pharmacists—Internship requirements.
PARENT/CHILD HEALTH			
246-710	Coordinated children's services.	246-861	Pharmacists—Professional pharmaceutical education.
246-760	Auditory and visual standards—School districts.	246-863	Pharmacists—Licensing.
246-762	Scoliosis screening—School districts.	246-865	Pharmaceutical services—Extended care facility.
246-780	Farmers' market nutrition program.	246-867	Impaired pharmacist rehabilitation.
246-790	Special supplemental nutrition program for women, infants, and children (WIC).	246-869	Pharmacy licensing.
		246-871	Pharmaceutical—Parenteral products for nonhospitalized patients.
		246-873	Pharmacy—Hospital standards.
		246-875	Pharmacy—Patient medication record systems.
		246-877	Pharmaceutical—Sales prohibited.
		246-878	Good compounding practices.
		246-879	Pharmaceutical wholesalers.
		246-881	Pharmacy—Prescription drug price advertising.
		246-883	Pharmaceutical—Sales requiring prescriptions.
		246-885	Pharmacy—Identification, imprints, markings, and labeling of legend drugs.
		246-886	Animal control—Legend drugs.
		246-887	Pharmacy—Regulations implementing the Uniform Controlled Substances Act.
		246-888	Medication assistance.
		246-889	Pharmaceutical—Precursor substance control.

246-891	Pharmacy—Prophylactics.		effective 1/15/01.] Repealed by 02-02-015, filed 12/21/01, effective 1/21/02. Statutory Authority: RCW 43.70.020(5), 43.70.040, 43.70.060, 43.70.070, 43.70.130.
246-895	Pharmacy—Good manufacturing practice for finished pharmaceuticals.		
246-897	Pharmacy—Drug availability.	246-30-020	How does the AWARDS program work? [Statutory Authority: RCW 43.70.040 (1) and (5), 43.70.020(5), 43.70.130, 43.70.060. 01-01-101, § 246-30-020, filed 12/15/00, effective 1/15/01.] Repealed by 02-02-015, filed 12/21/01, effective 1/21/02. Statutory Authority: RCW 43.70.020(5), 43.70.040, 43.70.060, 43.70.070, 43.70.130.
246-899	Pharmaceutical—Drug product substitution.		
246-901	Pharmacy ancillary personnel.		
246-903	Nuclear pharmacies and pharmacists.		
246-904	Health care entities.		
246-905	Pharmacy—Home dialysis program.	246-30-030	Are there any limits on the AWARDS program? [Statutory Authority: RCW 43.70.040 (1) and (5), 43.70.020(5), 43.70.130, 43.70.060. 01-01-101, § 246-30-030, filed 12/15/00, effective 1/15/01.] Repealed by 02-02-015, filed 12/21/01, effective 1/21/02. Statutory Authority: RCW 43.70.020(5), 43.70.040, 43.70.060, 43.70.070, 43.70.130.
246-907	Pharmaceutical licensing periods and fees.		
246-915	Physical therapists.		
246-918	Physician assistants—Medical quality assurance commission.		
246-919	Medical quality assurance commission.		
246-922	Podiatric physicians and surgeons.		
246-924	Psychologists.		
246-926	Radiological technologists.		
246-928	Respiratory care practitioners.		
246-930	Sex offender treatment provider.		
246-933	Veterinarians—Veterinary board.		
246-935	Veterinary technicians.		
246-937	Registered veterinary medication clerks.		
246-939	Surgical technologist program.		

TRAUMA/EMERGENCY MEDICAL SERVICES

246-976	Emergency medical services and trauma care systems.
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DISPOSITION OF CHAPTERS FORMERLY CODIFIED IN THIS TITLE

Chapter 246-05

LOCAL PUBLIC HEALTH—GUIDELINES

246-05-001	Purpose. [Statutory Authority: RCW 43.70.020. 93-19-061, § 246-05-001, filed 9/13/93, effective 10/14/93.] Repealed by 99-03-062, filed 1/18/99, effective 2/18/99. Statutory Authority: RCW 43.70.480.
246-05-010	Definitions. [Statutory Authority: RCW 43.70.020. 93-19-061, § 246-05-010, filed 9/13/93, effective 10/14/93.] Repealed by 99-03-062, filed 1/18/99, effective 2/18/99. Statutory Authority: RCW 43.70.480.
246-05-020	Appendix—County, city, or town in a public health district, department, or county-city department. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-05-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.46.080 and 43.20.050. 83-19-057 (Order 268), § 248-990-990, filed 9/20/83; 83-04-011 (Order 253), § 248-990-990, filed 1/24/83; Order 104, Appendix—Guidelines (codified as WAC 248-990-990), filed 9/25/74; Appendix, filed 8/4/67.] Repealed by 99-03-063, filed 1/18/99, effective 2/18/99. Statutory Authority: RCW 43.30.050 and 70.46.080.
246-05-030	Assurance of nonsupplanting. [Statutory Authority: RCW 43.70.020. 93-19-061, § 246-05-030, filed 9/13/93, effective 10/14/93.] Repealed by 99-03-062, filed 1/18/99, effective 2/18/99. Statutory Authority: RCW 43.70.480.

**Chapter 246-09
REFUND OF FEES**

246-09-060	Refund of fees. [Statutory Authority: RCW 43.01.072. 90-08-003 (Order 044), § 246-09-060, filed 3/22/90, effective 4/22/90.] Decodified by 91-02-049 (Order 121), filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.040. Recodified as WAC 246-08-560.
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**Chapter 246-30
THE AWARDS PROGRAM**

246-30-010	What is the AWARDS program? [Statutory Authority: RCW 43.70.040 (1) and (5), 43.70.020(5), 43.70.130, 43.70.060. 01-01-101, § 246-30-010, filed 12/15/00,
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**Chapter 246-132
CLASS IV HIV HEALTH INSURANCE ELIGIBILITY**

246-132-020	Class IV human immunodeficiency virus (HIV) insurance program. [Statutory Authority: RCW 70.24.130 and 70.24.440. 92-02-018 (Order 224), § 246-132-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-132-020, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW and 1989 c 260 § 3. 90-03-052 (Order 020), § 248-180-010, filed 1/16/90, effective 2/16/90.] Repealed by 94-06-048, filed 3/1/94, effective 4/1/94. Statutory Authority: RCW 70.24.130 and 70.24.440.
246-132-030	Eligibility. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-132-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW and 1989 c 260 § 3. 90-03-052 (Order 020), § 248-180-020, filed 1/16/90, effective 2/16/90.] Repealed by 94-06-048, filed 3/1/94, effective 4/1/94. Statutory Authority: RCW 70.24.130 and 70.24.440.

**Chapter 246-171
TUBERCULOSIS—FINANCIAL RESPONSIBILITY**

246-171-010	Definitions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-010, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-010, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-171-020	Statement of financial resources. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-020, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-020, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-171-030	Statement of financial resources—Cooperation in obtaining information. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-030, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-021, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-171-040	Statement of financial resources—Emergencies. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-040, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-022, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-171-050	Financial ability—Dueterrmination. [Statutory Authority: RCW 70.33.020 and 70.30.072. 92-02-018 (Order 224), § 246-171-050, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-050, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-030, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-171-060	Financial ability—Forms. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-060, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-040, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-171-070	Financial ability—Review of financial ability. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order

	121), recodified as § 246-171-070, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-050, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.		
246-171-080	Financial ability—Standards generally. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-080, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-060, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-070	Water closets—Multiple dwellings. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-070, filed 12/27/90, effective 1/31/91; Regulation .94.060, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
246-171-090	Financial ability—Inability to pay. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-090, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-061, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-080	Plumbing fixtures. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-080, filed 12/27/90, effective 1/31/91; Regulation .94.070, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
246-171-100	Financial ability—Specific minimum standards. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-100, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-070, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-090	Drainage systems. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-090, filed 12/27/90, effective 1/31/91; Regulation .94.080, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
246-171-110	Payment by patient. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-110, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-080, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-100	Drainage pipes. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-100, filed 12/27/90, effective 1/31/91; Regulation .94.090, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
246-171-120	Liability of estate. [Statutory Authority: RCW 70.33.020 and 70.30.072. 92-02-018 (Order 224), § 246-171-120, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-120, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-090, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-110	Cleanouts. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-110, filed 12/27/90, effective 1/31/91; Regulation .94.100, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
246-171-130	Statement of costs. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-130, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-100, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-120	Traps. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-120, filed 12/27/90, effective 1/31/91; Regulation .94.110, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
246-171-140	Payment by county. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-171-140, filed 12/27/90, effective 1/31/91; Order 31, § 248-118-110, filed 8/18/69.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.	246-201-130	Pipes—Adequate air circulation. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-130, filed 12/27/90, effective 1/31/91; Regulation .94.120, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-140	Soil stacks. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-140, filed 12/27/90, effective 1/31/91; Regulation .94.130, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-150	Water and air pressure tests. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-150, filed 12/27/90, effective 1/31/91; Regulation .94.140, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-160	Clogging substances. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-160, filed 12/27/90, effective 1/31/91; Regulation .94.150, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-170	Food receptacles and the drainage system. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-170, filed 12/27/90, effective 1/31/91; Regulation .94.160, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-180	Location of water closets. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-180, filed 12/27/90, effective 1/31/91; Regulation .94.170, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-190	Disposal where no sewers. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-190, filed 12/27/90, effective 1/31/91; Regulation .94.180, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
		246-201-200	Backflow requirements. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-200, filed 12/27/90, effective 1/31/91; Regulation .94.050, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

Chapter 246-201

BASIC PLUMBING PRINCIPLES

tion .94.190, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-201-210 Sanitary maintenance. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-201-210, filed 12/27/90, effective 1/31/91; Regulation .94.200, effective 3/11/60.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-100 Foot rinse. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-100, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-100, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-110 Number of bathers permitted. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-110, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-110, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

**Chapter 246-255
RADIATION PROTECTION—FORMS**

246-255 Forms. [Forms set forth within chapter 402-990 WAC were filed January 8, 1969, entitled "Instructions for preparation of application for radioactive material license," (Forms RHF-1, RHF-2, RHF-3, RHF-4, RHF-5, RHF-14-1, RHF-14-2). Chapter 402-990 WAC was recodified as chapter 246-255 by WSR 91-02-049 (Order 121), filed December 27, 1990, effective January 31, 1991. Statutory Authority: RCW 43.70.040.] Repealed by 96-19-041, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.70.040.

246-264-120 Water quality. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-120, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-120, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-120, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-130 Chlorine content. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-130, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-130, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

**Chapter 246-264
WATER SAFETY TEACHING STATIONS**

246-264-010 Definitions. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-010, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-010, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-140 Water recirculation. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-140, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-140, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-140, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-020 Scope of chapter—Size and depth. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-020, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-020, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-020, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-150 Operation and sanitary control. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-150, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-150, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-150, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-030 Approval for construction. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-030, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-030, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-030, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-160 Bath house. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-160, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-160, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-040 Drinking fountain. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-040, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-040, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-170 First aid. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-170, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-170, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-050 Plans and specifications—Approval—Notice to local health officer. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-050, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-050, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-050, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-180 Emergency telephone list. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-180, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-180, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-060 Toilet facilities. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-060, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-060, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-190 Telephone required. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-190, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-190, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-070 Location. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-070, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-070, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-200 Health menace prohibited. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-200, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-200, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-200, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-264-080 Enclosure and cover. [Statutory Authority: RCW 43.20.050. 92-02-020 (Order 226B), § 246-264-080, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-264-080, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-080, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

**Chapter 246-316
BOARDING HOMES**

246-264-090 Rinsing shower. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-264-090, filed 12/27/90, effective 1/31/91; Order 34, § 248-132-090, filed 6/26/70.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

246-316-001 Purpose and scope. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-001, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-316-001, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213. 86-08-002 (Order 2348), § 248-16-999, filed 3/20/86; Regulation .16.999, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.

246-316-010 Definitions. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-010, filed 6/21/94, effective 7/22/94;

- 92-02-018 (Order 224), § 246-316-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-001, filed 4/14/89; 83-13-068 (Order 264), § 248-16-001, filed 6/16/83; Order 147, § 248-16-001, filed 6/29/77; Order 97, § 248-16-001, filed 4/5/74; § 248-16-001, filed 10/3/67; Emergency Regulation filed 8/4/67; Regulation.16.001, effective 3/11/60; Subsec. 6, Rule 1 and Subsec. 7, Rule 2, filed 5/31/61.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-020 Licensure—Initial, renewal, day care approval respite care, modifications. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-020, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-316-020, filed 7/26/93, effective 8/26/93. Statutory Authority: RCW 18.20.090 and 34.05.220. 92-02-018 (Order 224), § 246-316-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-020, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 18.20.909 [18.20.090]. 90-06-019 (Order 039), § 248-16-031, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-031, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-030 Responsibilities and rights—Licensee and department. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-030, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-033, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-040 Administrator. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-040, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-316-040, filed 7/26/93, effective 8/26/93. Statutory Authority: RCW 18.20.090. 92-02-018 (Order 224), § 246-316-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-036, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-045 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-045, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-316-045, filed 7/26/93, effective 8/26/93.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-050 Staff. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-050, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-316-050, filed 7/26/93, effective 8/26/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-046, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-055 Policies and procedures. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-055, filed 6/21/94, effective 7/22/94.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-060 HIV/AIDS education and training. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-060, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.24.310. 89-21-038 (Order 3), § 248-16-048, filed 10/12/89, effective 11/12/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-070 Construction. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-070, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-070, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-057, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-080 Communication system. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-080, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-060, filed 4/14/89; 83-13-068 (Order 264), § 248-16-060, filed 6/16/83; Order 147, § 248-16-060, filed 6/29/77; Regulation.16.060, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-090 Water supply. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-090, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-090, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-070, filed 4/14/89; 83-13-068 (Order 264), § 248-16-070, filed 6/16/83; Order 147, § 248-16-070, filed 6/29/77; Regulation.16.070, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-100 Sewage and liquid waste disposal. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-100, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-100, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-080, filed 4/14/89; Order 147, § 248-16-080, filed 6/29/77; Regulation.16.080, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-110 Garbage and refuse disposal. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-110, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-090, filed 4/14/89; 83-13-068 (Order 264), § 248-16-090, filed 6/16/83; Order 147, § 248-16-090, filed 6/29/77; Regulation.16.090, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-120 Lighting. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-120, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-105, filed 4/14/89; 83-13-068 (Order 264), § 248-16-105, filed 6/16/83.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-130 Heating—Temperature. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-130, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-110, filed 4/14/89; 83-13-068 (Order 264), § 248-16-110, filed 6/16/83; Order 147, § 248-16-110, filed 6/29/77; Regulation.16.110, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-140 Ventilation. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-140, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-115, filed

- 4/14/89; 83-13-068 (Order 264), § 248-16-115, filed 6/16/83.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-150 Resident room—Room furnishings—Storage. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-150, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-150, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-121, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-160 Toilet rooms and bathrooms. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-160, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-131, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-170 Food and nutrition services. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-170, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-170, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-141, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-180 Day rooms. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-180, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-150, filed 4/14/89; 83-13-068 (Order 264), § 248-16-150, filed 6/16/83; Order 147, § 248-16-150, filed 6/29/77; § 248-16-150, filed 10/3/67; Emergency Regulation, filed 8/4/67; Regulation.16.150, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-190 Laundry. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-190, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-160, filed 4/14/89; 83-13-068 (Order 264), § 248-16-160, filed 6/16/83; Regulation.16.160, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-200 Storage space. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-200, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-200, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-170, filed 4/14/89; 83-13-068 (Order 264), § 248-16-170, filed 6/16/83; Regulation.16.170, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-210 Stairs—Ramps. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-210, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-180, filed 4/14/89; 83-13-068 (Order 264), § 248-16-180, filed 6/16/83; Regulation.16.180, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-220 Guardrails—Handrails. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-220, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-190, filed 4/14/89; 83-13-068 (Order 264), § 248-16-190, filed 6/16/83; Regulation.16.190, effective 3/11/60.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-230 Maintenance and housekeeping. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-230, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-202, filed 4/14/89; 83-13-068 (Order 264), § 248-16-202, filed 6/16/83; Order 147, § 248-16-202, filed 6/29/77.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-240 Criteria for accepting and retaining residents. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-240, filed 6/21/94, effective 7/22/94; 94-01-058, § 246-316-240, filed 12/8/93, effective 1/8/94; 92-02-018 (Order 224), § 246-316-240, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-213, filed 4/14/89; 83-13-068 (Order 264), § 248-16-213, filed 6/16/83; Order 147, § 248-16-213, filed 6/29/77.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-250 Resident rights. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-250, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-215, filed 4/14/89; 83-13-068 (Order 264), § 248-16-215, filed 6/16/83; Order 147, § 248-16-215, filed 6/29/77; Order 116, § 248-16-215, filed 5/23/75; § 248-16-215, filed 10/3/67; Emergency Regulation, filed 8/4/67.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-260 Resident services. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-260, filed 6/21/94, effective 7/22/94; 94-01-058, § 246-316-260, filed 12/8/93, effective 1/8/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-260, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-216, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-265 Limited nursing services. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-265, filed 6/21/94, effective 7/22/94.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-268 Health care services—Resident-arranged. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-268, filed 6/21/94, effective 7/22/94.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority:
- 246-316-270 First aid services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-316-270, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-222, filed 4/14/89; 83-13-068 (Order 264), § 248-16-222, filed 6/16/83; Order 147, § 248-16-222, filed 6/29/77.] Repealed by 94-13-180, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 18.20.090.
- 246-316-280 Notification—Change in resident's condition. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-280, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-280, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-223, filed 4/14/89; 83-13-068 (Order 264), § 248-16-223, filed 6/16/83; Order 147, § 248-16-223, filed 6/29/77.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-290 Safety measures and quality assurance. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-290, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-290, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order

- 2786), § 248-16-226, filed 4/14/89; 83-13-068 (Order 264), § 248-16-226, filed 6/16/83; Order 147, § 248-16-226, filed 6/29/77.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-300 Medication services. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-300, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-300, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-229, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-310 Resident register. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-310, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-310, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-230, filed 4/14/89; 83-13-068 (Order 264), § 248-16-230, filed 6/16/83; Order 147, § 248-16-230, filed 6/29/77; Order 116, § 248-16-230, filed 5/23/75; § 248-16-230, filed 10/3/67; Emergency Regulation, filed 8/4/67; Regulation.16.230, effective 3/11/60; Subsection 1, filed 5/31/61.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-320 Resident health record. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-320, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-320, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-320, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-235, filed 4/14/89; 83-13-068 (Order 264), § 248-16-235, filed 6/16/83.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-330 Adult day care. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-330, filed 6/21/94, effective 7/22/94; 92-02-018 (Order 224), § 246-316-330, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-330, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-300, filed 4/14/89.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-335 Residents—Dementia care. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-335, filed 6/21/94, effective 7/22/94.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-340 Exemptions. [Statutory Authority: RCW 18.20.090. 94-13-180, § 246-316-340, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), Decodified as § 246-316-340, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.20.090. 89-09-034 (Order 2786), § 248-16-900, filed 4/14/89. Statutory Authority: 1985 c 213. 86-08-002 (Order 2348), § 248-16-900, filed 3/20/86; Order 147, § 248-16-900, filed 6/29/77.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- 246-316-990 Fees. [Statutory Authority: RCW 18.20.050, 43.70.110 and 43.70.250. 98-01-165, § 246-316-990, filed 12/22/97, effective 1/22/98; 96-12-027, § 246-316-990, filed 5/30/96, effective 6/30/96. Statutory Authority: RCW 43.70.250, 43.70.110 and 43.20B.020. 95-12-097, § 246-316-990, filed 6/7/95, effective 7/8/95. Statutory Authority: RCW 43.70.110 and 43.70.250. 94-13-180, § 246-316-990, filed 6/21/94, effective 7/22/94. Statutory Authority: RCW 43.70.250. 92-12-086 (Order 276), § 246-316-990, filed 6/2/92, effective 7/1/92. Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-316-990, filed 12/27/90, effective 1/31/91.] Decodified by 98-20-021, filed 9/25/98, effective 9/25/98. Statutory Authority: RCW 18.20.240.
- Chapter 246-318
HOSPITALS**
- 246-318-010 Definitions. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-010, filed 3/5/93, effective 4/5/93; 92-02-018 (Order 224), § 246-318-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-18-001, filed 11/30/90, effective 12/31/90; 89-22-106 (Order 010), § 248-18-001, filed 11/1/89, effective 12/2/89; 88-18-021 (Order 2680), § 248-18-001, filed 8/30/88. Statutory Authority: 1985 c 213. 86-08-002 (Order 2348), § 248-18-001, filed 3/20/86. Statutory Authority: RCW 70.41.030 and 43.20.050. 84-17-077 (Order 275), § 248-18-001, filed 8/16/84; 83-19-058 (Order 269), § 248-18-001, filed 9/20/83; 83-01-003 (Order 245), § 248-18-001, filed 12/2/82. Statutory Authority: RCW 70.41.030. 81-05-029 (Order 209), § 248-18-001, filed 2/18/81; Order 135, § 248-18-001, filed 12/6/76; Order 119, § 248-18-001, filed 5/23/75; Order 106, § 248-18-001, filed 1/13/75; Order 91, § 248-18-001, filed 10/3/73; Order 83, § 248-18-001, filed 4/9/73; Order 50, § 248-18-001, filed 12/17/70; Regulation 18.001, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-013 License expiration dates—Notice of decision—Adjudicative proceeding. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-013, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-013, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.41.030. 90-06-019 (Order 039), § 248-18-015, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 82-24-002 (Order 249), § 248-18-015, filed 11/18/82; Order 119, § 248-18-015, filed 5/23/75; Order 69, § 248-18-015, filed 1/13/72.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-015 Exemptions and interpretations. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-015, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-015, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-010, filed 5/30/90, effective 6/30/90. Statutory Authority: 1985 c 213. 86-08-002 (Order 2348), § 248-18-010, filed 3/20/86. Statutory Authority: RCW 70.41.30 [70.41.030]. 81-05-029 (Order 209), § 248-18-010, filed 2/18/81; Order 142, § 248-18-010, filed 2/8/77; Order 119, § 248-18-010, filed 5/23/75; Order 50, § 248-18-010, filed 12/17/70; Order 22, § 248-18-010, filed 6/27/69; Order 10, § 248-18-010, filed 1/2/69; Regulation 18.010, effective 3/11/60; Subsection (3), filed 2/17/61.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-017 Single license to cover two or more buildings—When permissible. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-017, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-017, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 85-23-020 (Order 2305), § 248-18-017, filed 11/13/85; Order 119, § 248-18-017, filed 5/23/75.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-018 Hospital license to cover attached nursing home building—When permissible. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-018, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-018, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-018, filed 5/30/90, effective 6/30/90; Order 119, § 248-18-018, filed 5/23/75.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-020 Approval of plans. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-020, filed 12/27/90, effective 1/31/91. Statutory

Reviser's note: Later promulgation, see chapter 388-78A WAC.

- Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-020, filed 5/30/90, effective 6/30/90; Order 119, § 248-18-020, filed 5/23/75; Regulation 18.020, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-025 Required approval for occupancy after completion of new construction. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-025, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-025, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 82-13-084 (Order 230), § 248-18-025, filed 6/22/82; Order 123, § 248-18-025, filed 3/18/76.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-030 Governing body and administration. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 87-03-020 (Order 2463), § 248-18-031, filed 1/13/87. Statutory Authority: RCW 70.41.030 and 43.20.050. 84-17-077 (Order 275), § 248-18-031, filed 8/16/84.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-033 Medical staff. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-033, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 84-17-077 (Order 275), § 248-18-033, filed 8/16/84.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-035 Infection control program. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-035, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-035, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-18-035, filed 11/30/90, effective 12/31/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 89-21-039 (Order 4), § 248-18-035, filed 10/12/89, effective 11/12/89; Order 119, § 248-18-035, filed 5/23/75; Order 107, § 248-18-035, filed 1/13/75.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-040 Personnel. [Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-318-040, filed 7/26/93, effective 8/26/93. Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-18-040, filed 11/30/90, effective 12/31/90; 86-08-086 (Order 2362), § 248-18-040, filed 4/2/86. Statutory Authority: RCW 70.41.030 and 43.20.050. 82-24-003 (Order 250), § 248-18-040, filed 11/18/82. Statutory Authority: RCW 43.20.050. 80-02-003 (Order 191), § 248-18-040, filed 1/4/80; Order 121, § 241-18-040, filed 9/18/75; Order 119, § 248-18-040, filed 5/23/75; Order 91, § 248-18-040, filed 10/3/73; Order 76, § 248-18-040, filed 1/9/73; Regulation 18.040, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-042 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-318-042, filed 7/26/93, effective 8/26/93.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-050 Water supply. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-050, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-055, filed 5/23/75.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-060 Plumbing. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-004 (Order 175), § 248-18-060, filed 3/9/79; Order 119, § 248-18-060, filed 5/23/75; Regulation 18.060, effective 3/11/60.] Repealed by 97-20-101,
- filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-070 Staff facilities. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-070, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-070, filed 5/23/75; Regulation 18.070, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-080 Storage. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-080, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-080, filed 5/23/75; Regulation 18.080, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-090 Heating. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-004 (Order 175), § 248-18-090, filed 3/9/79; Order 119, § 248-18-090, filed 5/23/75; Regulation 18.090, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-100 Lighting and wiring. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-100, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-100, filed 5/23/75; Regulation 18.100, effective 1/11/61.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-110 Emergency light and power. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-081 (Order 176), § 248-18-110, filed 4/2/79; Order 119, § 248-18-110, filed 5/23/75; Regulation 18.110, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-120 Ventilation. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-120, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-120, filed 5/23/75; Regulation 18.120, effective 1/11/61.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-130 Corridors and doors. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-130, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-130, filed 5/23/75; Regulation 18.130, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-135 Carpets. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-135, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-004 (Order 175), § 248-18-135, filed 3/9/79; Order 119, § 248-18-135, filed 5/23/75; Order 9, § 248-18-135, filed 1/2/69; Regulation 18.135, filed 8/4/67.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-140 Stairways, ramps, and elevators. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-140, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-140, filed 5/23/75; Regulation 18.140, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-150 Maintenance. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-004 (Order 175), § 248-18-150, filed 3/9/79; Order 119, § 248-18-150, filed 5/23/75; Order 9, § 248-18-150, filed 1/2/69; Regulation 18.150, filed 8/4/67; Regulation 18.150, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-155 Housekeeping. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-155, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-004 (Order 175), § 248-18-155, filed 3/9/79.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-160 Laundry. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-081 (Order 176), § 248-18-160, filed 4/2/79; Order 119, § 248-18-160, filed 5/23/75; Regula-

- tion 18.160, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-170 Sewage, garbage, and waste. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-004 (Order 175), § 248-18-170, filed 3/9/79; Order 119, § 248-18-170, filed 5/23/75; Regulation 18.170, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-180 Dietary and/or food service. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-180, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-07-048 (Order 257), § 248-18-180, filed 3/18/83; Order 119, § 248-18-180, filed 5/23/75; § 248-18-180, filed 12/6/67; Regulation 18.180, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-190 Patient care services, general. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050 and 70.41.030. 84-02-036 (Order 271), § 248-18-190, filed 12/30/83. Statutory Authority: RCW 43.20.050 and chapter 70.41 RCW. 81-22-014 (Order 216), § 248-18-190, filed 10/23/81; Order 119, § 248-18-190, filed 5/23/75; Regulation 18.190, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-200 Abuse reports—Children and developmentally disabled adults. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 78-08-060 (Order 162), § 248-18-202, filed 7/24/78.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-210 Pediatric services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-210, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-216, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-220 Obstetrical services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-220, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-220, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-221, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-221, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-230 Intermediate care nursery service—Neonatal intensive care nursery service. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-230, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-224, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-240 Critical care service. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-18-240, filed 11/30/90, effective 12/31/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-250 Renal dialysis services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-250, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-18-250, filed 11/30/90, effective 12/31/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-260 Long-term care services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-260, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-260, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-18-260, filed 11/30/90, effective 12/31/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-270 Alcoholism and/or substance abuse unit. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-270, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-270, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 84-22-003 (Order 277), § 248-18-235, filed 10/26/84.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-280 Psychiatric units and services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-280, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-280, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-23-012 (Order 113), § 248-18-240, filed 11/13/90, effective 12/14/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-240, filed 9/20/83. Statutory Authority: RCW 43.20.050 and chapter 70.41 RCW. 81-22-014 (Order 216), § 248-18-240, filed 10/23/81; Order 119, § 248-18-240, filed 5/23/75; Regulation 18.240, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-290 Surgery—Operating rooms and areas—Special procedure rooms—Surgical treatment or diagnostic areas. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-290, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-290, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 85-23-017 (Order 2302), § 248-18-251, filed 11/13/85.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-300 Anesthesia services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-300, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-300, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 85-23-017 (Order 2302), § 248-18-253, filed 11/13/85.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-310 Post-anesthesia recovery areas. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-310, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-310, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 85-23-017 (Order 2302), § 248-18-256, filed 11/13/85.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-320 Processing and sterilizing services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-320, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 85-05-034 (Order 281), § 248-18-260, filed 2/15/85; Order 119, § 248-18-260, filed 5/23/75; Regulation 18.260, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-330 Use of medical gases, combustible anesthetics. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-330, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-081 (Order 176), § 248-18-270, filed 4/2/79; Order 119, § 248-18-270, filed 5/23/75; Regulation 18.270, effective 3/11/60.] Repealed by 99-04-052, filed

- 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-340 Nonflammable medical gases. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-340, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050. 79-12-038 (Order 187), § 248-18-280, filed 11/20/79. Statutory Authority: RCW 70.41.030. 79-04-081 (Order 176), § 248-18-280, filed 4/2/79; Order 119, § 248-18-280, filed 5/23/75; Regulation 18.280, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-350 Emergency care services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-350, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-350, filed 12/27/90, effective 1/31/91; Order 142, § 248-18-285, filed 2/8/77; Order 119, § 248-18-285, filed 5/23/75; Order 110, § 248-18-285, filed 3/14/75; Order 106, § 248-18-285, filed 1/13/75.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-360 Diagnostic and treatment facilities, outpatient services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-360, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-290, filed 5/23/75; Order 106, § 248-18-290, filed 1/13/75; Regulation 18.290, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-370 Laboratory. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-370, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-370, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 87-23-056 (Order 2560), § 248-18-300, filed 11/18/87; Order 119, § 248-18-300, filed 5/23/75; Regulation 18.300, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-380 Diagnostic and therapeutic radiology and other imaging services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-380, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-380, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-109 (Order 008), § 248-18-311, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-390 Physical and occupational therapy services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-390, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 87-03-030 (Order 2464), § 248-18-312, filed 1/14/87.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-400 Respiratory care services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-400, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 79-04-081 (Order 176), § 248-18-315, filed 4/2/79.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-410 Other services. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-410, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-410, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 87-03-030 (Order 2464), § 248-18-321, filed 1/14/87.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-420 Hospital pharmacy. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-420, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-420, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050 and 70.41.030. 84-02-036 (Order 271), § 248-18-331, filed 12/30/83. Formerly WAC 248-18-330.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-430 Intravenous preparation. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-430, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 83-13-061 (Order 261), § 248-18-335, filed 6/15/83.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-435 Intravenous administration. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-435, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-435, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 83-13-061 (Order 261), § 248-18-336, filed 6/15/83.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-440 Records and reports—Medical record system. [Statutory Authority: RCW 70.41.030. 92-02-018 (Order 224), § 246-318-440, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-440, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 88-18-021 (Order 2680), § 248-18-440, filed 8/30/88; 85-23-020 (Order 2305), § 248-18-440, filed 11/13/85; Order 142, § 248-18-440, filed 2/8/77; Order 135, § 248-18-440, filed 12/6/76; Order 119, § 248-18-440, filed 5/23/75; Regulation 18.440, effective 3/11/60.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-450 Discharge planning. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-450, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 88-18-020 (Order 2679), § 248-18-445, filed 8/30/88.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-500 Applicability of WAC 246-318-500 through 246-318-99902. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-500, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-500, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-500, filed 9/20/83. Statutory Authority: RCW 70.41.030 [70.41.030]. 81-05-029 (Order 209), § 248-18-500, filed 2/18/81; Order 119, § 248-18-500, filed 5/23/75; Order 50, § 248-18-500, filed 12/17/70; Regulation 18.500, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-501 Legal authority of the department. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-501, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213. 86-08-002 (Order 2348), § 248-18-999, filed 3/20/86; Order 119, § 248-18-999, filed 5/23/75; Regulation 18.999, effective 3/11/60.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-318-510 Programs, drawings and construction. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-510, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-510, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-510, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 [70.41.030]. 81-05-029 (Order 209), § 248-18-510, filed 2/18/81. Statutory Authority: RCW 43.20.050. 80-03-062 (Order 193), § 248-18-510, filed 2/26/80; Order 123, § 248-18-510, filed 3/18/76; Order 119, § 248-18-510, filed 5/23/75; Order 9, § 248-18-510, filed 1/2/69; Regulation 18.520(2)(d), filed 8/4/67; Regulation 18.520 (part), filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-520 Design and construction standards, general. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-520, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-520, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-105 (Order 009), § 248-18-515, filed 11/1/89, effective 12/2/89; 88-23-083 (Order 2729), § 248-18-515, filed

- 11/18/88. Statutory Authority: 1985 c 213, 86-08-002 (Order 2348), § 248-18-515, filed 3/20/86. Statutory Authority: RCW 70.41.030 [70.41.030]. 81-05-029 (Order 209), § 248-18-515, filed 2/18/81; Order 119, § 248-18-515, filed 5/23/75; Order 50, § 248-18-515, filed 12/17/70; Order 22, § 248-18-515, filed 6/27/69; Regulation 18.530, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-530 Site and site development. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-530, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-530, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-520, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-520, filed 9/20/83; Order 119, § 248-18-520, filed 5/23/75; Order 106, § 248-18-520, filed 1/13/75; Regulation 18.540, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-540 General design requirements. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-540, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-540, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-719, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030. 89-22-105 (Order 009), § 248-18-719, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-550 General requirements for support facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-550, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-550, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-105 (Order 009), § 248-18-711, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-560 Maintenance and mechanical facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-560, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-560, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-705, filed 5/30/90, effective 6/30/90; Order 119, § 248-18-705, filed 5/23/75; Regulation 18.750, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-570 Administrative facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-570, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-570, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-525, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-525, filed 9/20/83; Order 119, § 248-18-525, filed 5/23/75; Regulation 18.550, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-580 Receiving, storage and distribution facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-580, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-580, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050. 85-05-034 (Order 281), § 248-18-700, filed 2/15/85; Order 119, § 248-18-700, filed 5/23/75; Regulation 18.740, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-590 Central sterilizing and processing service facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-590, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-590, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-690, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-690, filed 9/20/83; Order 119, § 248-18-690, filed 5/23/75; Regulation 18.720, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-600 Environmental services facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-600, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-600, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-690, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-690, filed 9/20/83; Order 119, § 248-18-690, filed 5/23/75; Regulation 18.720, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-610 Laundry facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-610, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-610, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-695, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-695, filed 9/20/83; Order 119, § 248-18-695, filed 5/23/75; Regulation 18.730, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-620 Dietary facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-620, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-620, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-685, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-07-048 (Order 257), § 248-18-685, filed 3/18/83; Order 119, § 248-18-685, filed 5/23/75; Regulation 18.710, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-630 Laboratory and pathology facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-630, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-630, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-660, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030. 87-23-056 (Order 2560), § 248-18-660, filed 11/18/87. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-660, filed 9/20/83; Order 119, § 248-18-660, filed 5/23/75; § 248-18-660, filed 10/3/67; Regulation 18.660, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-640 Pharmacy. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-640, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-640, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 83-13-067 (Order 262), § 248-18-670, filed 6/16/83; Order 119, § 248-18-670, filed 5/23/75; Regulation 18.680, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-650 Radiology and other imaging facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-650, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-650, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-109 (Order 008), § 248-18-656, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.

- 246-318-660 Nuclear medicine facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-660, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-660, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-665, filed 5/30/90, effective 6/30/90; Order 119, § 248-18-665, filed 5/23/75; Regulation 18.670, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-670 Electrocardiography facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-670, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-670, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 87-03-030 (Order 2464), § 248-18-662, filed 1/14/87.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-680 Electroencephalography facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-680, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-680, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 87-03-030 (Order 2464), § 248-18-663, filed 1/14/87.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-690 Nursing unit. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-690, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-690, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-530, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 43.20.050 and chapter 70.41 RCW. 81-22-014 (Order 216), § 248-18-530, filed 10/23/81; Order 119, § 248-18-530, filed 5/23/75; Regulation 18.560, § § 1, 2 and 3, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-700 Pediatric nursing unit. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-700, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-700, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-541, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-710 Emergency facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-710, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-710, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-645, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-645, filed 9/20/83; Order 119, § 248-18-645, filed 5/23/75; Order 106, § 248-18-645, filed 1/13/75; Regulation 18.630, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-720 Surgery suite. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-720, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-720, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-565, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030. 85-23-017 (Order 2302), § 248-18-565, filed 11/13/85. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-565, filed 9/20/83; Order 119, § 248-18-565, filed 5/23/75; Order 107, § 248-18-565, filed 1/13/75; Regulation 18.590, § 1, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-730 Recovery/post anesthesia care unit (PACU). [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-730, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121),
- 246-318-740 Critical care facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-740, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-740, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 90-24-044 (Order 115), § 248-318-740, filed 11/30/90, effective 12/31/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-750 Facilities for care of patients in labor. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-750, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-750, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-606, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-760 Obstetrical delivery facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-760, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-760, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-601, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-770 Birthing rooms. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-770, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-770, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-608, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-780 Obstetrical recovery unit. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-780, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-780, filed 12/27/90, effective 1/31/91; Order 119, § 248-18-610, filed 5/23/75; Order 107, § 248-18-610, filed 1/13/75; Regulation 18.600, § 13, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-790 Newborn nursery facilities. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-790, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-790, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-616, filed 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-799 Infant formula facilities. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-799, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW. 90-12-014 (Order 061), § 248-18-640, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050. 83-19-058 (Order 269), § 248-18-640, filed 9/20/83; Order 119, § 248-18-640, filed 5/23/75; Regulation 18.620, filed 1/25/62.] Repealed by 93-07-011 (Order 338), filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 70.41.030.
- 246-318-800 Intermediate care nursery and neonatal intensive care nursery. [Statutory Authority: RCW 70.41.030. 93-07-011 (Order 338), § 246-318-800, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-318-800, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030. 89-22-106 (Order 010), § 248-18-637, filed

- 11/1/89, effective 12/2/89.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-810 Alcoholism and substance abuse nursing unit. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-810, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-810, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030 and 43.20.050, 84-22-003 (Order 277), § 248-18-532, filed 10/26/84.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-820 Psychiatric facilities. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-820, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-820, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030, 90-23-012 (Order 113), § 248-18-536, filed 11/13/90, effective 12/14/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-830 Rehabilitation facilities. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-830, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-830, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW, 90-12-014 (Order 061), § 248-18-675, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050, 83-19-058 (Order 269), § 248-18-675, filed 9/20/83; Order 119, § 248-18-675, filed 5/23/75; Regulation 18.690, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-840 Outpatient care facilities. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-840, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-840, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW, 90-12-014 (Order 061), § 248-18-568, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030, 85-23-017 (Order 2302), § 248-18-568, filed 11/13/85.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-850 Special procedure facilities. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-850, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-850, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW, 90-12-014 (Order 061), § 248-18-650, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030 and 43.20.050, 83-19-058 (Order 269), § 248-18-650, filed 9/20/83; Order 119, § 248-18-650, filed 5/23/75; Regulation 18.640, filed 1/25/62.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-860 Dialysis facilities. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-860, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-860, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030, 90-24-044 (Order 115), § 248-18-860, filed 11/30/90, effective 12/31/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-870 Long-term care unit. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-870, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-870, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030, 90-24-044 (Order 115), § 248-18-870, filed 11/30/90, effective 12/31/90.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-990 Fees. [Statutory Authority: RCW 70.41.100 and 43.20B.020, 98-13-035, § 246-318-990, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 43.70.250, 43.70.110 and 43.20B.020, 95-12-097, § 246-318-990, filed 6/7/95, effective 7/8/95. Statutory Authority: RCW 43.70.250, 92-12-028 (Order 273), § 246-318-990, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-318-990, filed 12/27/90, effective 1/31/91.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-9902 Appendix B—Dates of documents adopted by reference in chapter 246-318 WAC. [Statutory Authority: RCW 70.41.030, 93-07-011 (Order 338), § 246-318-9902, filed 3/5/93, effective 4/5/93. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-9902, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.41 RCW, 90-12-014 (Order 061), § 248-18-9902, filed 5/30/90, effective 6/30/90. Statutory Authority: RCW 70.41.030, 89-22-105 (Order 009), § 248-18-9902, filed 11/1/89, effective 12/2/89; 88-16-086 (Order 2667), § 248-18-9902, filed 8/2/88; 87-04-061 (Order 2466), § 248-18-9902, filed 2/4/87. Statutory Authority: RCW 70.41.030 and 43.20.050, 85-05-033 (Order 280), § 248-18-9902, filed 2/15/85; 82-24-001 (Order 248), § 248-18-9902, filed 11/18/82.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.
- 246-318-99910 Appendix J—Guidelines for laboratory quality assurance program in hospitals. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-318-99910, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.030, 87-24-038 (Order 2560), § 248-18-99910, filed 11/25/87.] Repealed by 99-04-052, filed 1/28/99, effective 3/10/99. Statutory Authority: RCW 70.41.030 and 43.70.040.

Reviser's note: Later promulgation, see chapter 246-320.

Chapter 246-321 HOSPICE CARE CENTER

- 246-321-001 Purpose. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-001, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-010 Definitions. [Statutory Authority: RCW 43.70.040, 92-02-018 (Order 224), § 246-321-010, filed 12/23/91, effective 1/23/92; 91-02-049 (Order 121), recodified as § 246-321-010, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213, 86-08-002 (Order 2348), § 248-21-002, filed 3/20/86. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-002, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-012 Licensure—Notice of decision—Adjudicative proceeding. [Statutory Authority: RCW 43.70.040 and 34.05.220, 92-02-018 (Order 224), § 246-321-012, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-012, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050 and chapter 34.05 RCW, 90-05-038 (Order 034), § 248-21-005, filed 2/14/90, effective 3/17/90. Statutory Authority: 43.20.050, 81-23-003 (Order 218), § 248-21-005, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-014 Governing body and administration. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-014, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-010, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-015 Staff—Personnel—Volunteers. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-015, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-015, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-017 HIV/AIDS education and training. [Statutory Authority: RCW 43.70.040 and 70.24.310, 92-02-018 (Order 224), § 246-321-017, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-017, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.24.310, 89-21-038 (Order 3), § 248-21-017, filed 10/12/89, effective 11/12/89.]

- tive 11/12/89.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-018 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 43.43.830 through 43.43.842, 93-16-030 (Order 381), § 246-321-018, filed 7/26/93, effective 8/26/93.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-020 Policies and procedures. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-020, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-025 Patient care services. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-025, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-025, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-030 Food and dietary services. [Statutory Authority: RCW 43.70.040, 92-02-018 (Order 224), § 246-321-030, filed 12/23/91, effective 1/23/92; 91-02-049 (Order 121), recodified as § 246-321-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-030, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-035 Infection control. [Statutory Authority: RCW 43.70.040, 92-02-018 (Order 224), § 246-321-035, filed 12/23/91, effective 1/23/92; 91-02-049 (Order 121), recodified as § 246-321-035, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.41.30 [70.41.030] and 43.20.050, 83-07-015 (Order 254), § 248-21-035, filed 3/10/83. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-035, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-040 Pharmaceutical service. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-040, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-045 Clinical records. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-045, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-045, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-050 Physical environment and equipment. [Statutory Authority: RCW 43.70.040, 92-02-018 (Order 224), § 246-321-050, filed 12/23/91, effective 1/23/92; 91-02-049 (Order 121), recodified as § 246-321-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-050, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-055 Nonflammable medical gases—Respiratory care. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-321-055, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 81-23-003 (Order 218), § 248-21-055, filed 11/6/81.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- 246-321-990 Fees. [Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-321-990, filed 12/27/90, effective 1/31/91.] Repealed by 97-03-080, filed 1/15/97, effective 2/15/97. Statutory Authority: RCW 43.70.040.
- Chapter 246-327**
HOME HEALTH AGENCIES
- 246-327-001 Scope and purpose. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-001, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-005, filed 6/7/89.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-327-010 Definitions. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-010, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.250, 92-02-018 (Order 224), § 246-327-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-015, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-025 Licensure—Initial, renewal, transfer. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-025, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.250, 92-02-018 (Order 224), § 246-327-025, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-025, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040, 90-06-019 (Order 039), § 248-27-025, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-025, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-030 Deemed status. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-030, filed 8/22/94, effective 9/22/94.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-035 Responsibilities and rights—Licensee and department. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-035, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120, 70.127.250 and 34.05.220, 92-02-018 (Order 224), § 246-327-035, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-035, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040, 90-06-019 (Order 039), § 248-27-035, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-035, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-045 Civil fines. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-045, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040, 90-06-019 (Order 039), § 248-27-045, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-045, filed 6/7/89.] Repealed by 94-17-136, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-327-055 License action and/or civil fine—Notice—Adjudicative proceeding. [Statutory Authority: RCW 70.127.120, 70.127.250 and 34.05.220, 92-02-018 (Order 224), § 246-327-055, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-055, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040, 90-06-019 (Order 039), § 248-27-055, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-055, filed 6/7/89.] Repealed by 94-17-136, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-327-065 General requirements. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-065, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-327-065, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-27-065, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-077 Patient bill of rights. [Statutory Authority: RCW 70.127.120, 94-17-136, § 246-327-077, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW

- 43.70.040.91-02-049 (Order 121), recodified as § 246-327-077, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-077, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-085 Organization and administration. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-085, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-085, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-085, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-090 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-090, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.43.830 through 43.43.842.93-16-030 (Order 381), § 246-327-090, filed 7/26/93, effective 8/26/93.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-095 Personnel, contractors and volunteers. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-095, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-095, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-095, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-105 HIV/AIDS education and training. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-105, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120, 70.127.250 and 70.24.310.92-02-018 (Order 224), § 246-327-105, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-105, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-105, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-115 Patient care policies and procedures. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-115, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-115, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-115, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-125 Supervision and coordination of patient services. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-125, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-125, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-125, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-135 Home health plan of treatment. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-135, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-135, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-135, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-145 Home health plan of care. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-145, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-145, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-145, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-155 Functions, duties, and responsibilities of direct care personnel. [Statutory Authority: RCW 70.127.120 and 70.127.250.92-02-018 (Order 224), § 246-327-155, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-155, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-155, filed 6/7/89.] Repealed by 94-17-136, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-155, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-155, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-165 Clinical records. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-165, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-165, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-165, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-175 Parenteral product services. [Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-175, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-175, filed 6/7/89.] Repealed by 94-17-136, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-327-185 Medical supplies—Equipment services. [Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-185, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040.91-02-049 (Order 121), recodified as § 246-327-185, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040.89-12-077 (Order 2790), § 248-27-185, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-327-990 Fees. [Statutory Authority: RCW 70.127.090, 43.20B.110, 43.70.250.01-22-062, § 246-327-990, filed 11/1/01, effective 12/2/01. Statutory Authority: RCW 70.127.090, 43.02B.020 [43.20B.020], 43.70.110 and 43.70.250.98-13-036, § 246-327-990, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 43.70.110, 43.70.250 and 70.127.090.97-15-096, § 246-327-990, filed 7/21/97, effective 8/21/97. Statutory Authority: RCW 43.70.110 and 43.70.250.96-12-026, § 246-327-990, filed 5/30/96, effective 6/30/96. Statutory Authority: RCW 43.70.250, 43.70.110 and 43.20B.020.95-12-097, § 246-327-990, filed 6/7/95, effective 7/8/95. Statutory Authority: RCW 70.127.120.94-17-136, § 246-327-990, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.090.93-21-034, § 246-327-990, filed 10/15/93, effective 10/28/93. Statutory Authority: RCW 43.70.250.92-15-084 (Order 288), § 246-327-990, filed 7/16/92, effective 8/16/92. Statutory Authority: RCW 43.70.040.91-02-050 (Order 122), § 246-327-990, filed 12/27/90, effective 1/31/91.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.

Reviser's note: Later promulgation, see chapter 246-335 WAC.

Chapter 246-328
ADULT FAMILY HOME RESIDENT MANAGERS AND PROVIDERS

- 246-328-100 Registration. [Statutory Authority: Chapter 18.48 RCW. 96-14-070, § 246-328-100, filed 6/28/96, effective 7/1/96.] Repealed by 98-05-060, filed 2/13/98, effective 3/16/98. Statutory Authority: RCW 43.70.280.
- 246-328-150 Responsibility for maintaining mailing address on file with the department. [Statutory Authority: Chapter 18.48 RCW. 96-14-070, § 246-328-150, filed 6/28/96, effective 7/1/96.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-328-200 HIV/AIDS prevention and information education requirements. [Statutory Authority: RCW 43.70.280.98-05-060, § 246-328-200, filed 2/13/98, effective 3/16/98. Statutory Authority: Chapter 18.48 RCW. 96-14-070, § 246-328-200, filed 6/28/96, effective 7/1/96.] Repealed by 02-20-078, filed 9/30/02, effective 10/31/02. Statutory Authority: 2002 c 223.
- 246-328-990 Adult family home provider or resident manager fees and renewal cycle. [Statutory Authority: RCW 43.70.280.98-05-060, § 246-328-990, filed 2/13/98, effective 3/16/98. Statutory Authority: Chapter 18.48 RCW. 96-14-070, § 246-328-990, filed 6/28/96, effective 7/1/96.]

tive 7/1/96.] Repealed by 02-20-078, filed 9/30/02, effective 10/31/02. Statutory Authority: 2002 c 223.

**Chapter 246-331
HOSPICE AGENCIES**

- 246-331-001 Purpose and scope. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-001, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-005, filed 6/7/89.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-331-010 Definitions. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-010, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.260. 92-02-018 (Order 224), § 246-331-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-015, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-025 Licensure—Initial, renewal, transfer. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-025, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.260. 92-02-018 (Order 224), § 246-331-025, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-025, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-31-025, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-025, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-030 Deemed status. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-030, filed 8/22/94, effective 9/22/94.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-035 Responsibilities and rights—Licensee and department. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-035, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120, 70.127.260 and 34.05.220. 92-02-018 (Order 224), § 246-331-035, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-035, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-31-035, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-035, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-045 Civil fines. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-045, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-31-045, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-045, filed 6/7/89.] Repealed by 94-17-138, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-331-055 License action and/or civil fine—Notice—Adjudicative proceeding. [Statutory Authority: RCW 70.127.120, 70.127.260 and 34.05.220. 92-02-018 (Order 224), § 246-331-055, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-055, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-31-055, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-055, filed 6/7/89.] Repealed by 94-17-138, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-331-065 General requirements. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-065, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-065, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-065, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-077 Patient bill of rights. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-077, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-077, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-077, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-085 Organization and administration. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-085, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-085, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-085, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-095 Personnel, contractors and volunteers. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-095, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-095, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-095, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-100 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-100, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-331-100, filed 7/26/93, effective 8/26/93.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-105 AIDS education and training. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-105, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120, 70.127.260 and 70.24.310. 92-02-018 (Order 224), § 246-331-105, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-105, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-105, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-115 Patient care policies and procedures. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-115, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-115, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-115, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-125 Supervision and coordination of patient services. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-125, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-125, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-125, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-135 Hospice plan of care. [Statutory Authority: RCW 70.127.120. 94-17-138, § 246-331-135, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-331-135, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-31-135, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-155 Functions, duties, and responsibilities of direct care personnel. [Statutory Authority: RCW 70.127.120 and 70.127.260. 92-02-018 (Order 224), § 246-331-155,

- filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-331-155, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-31-155, filed 6/7/89.] Repealed by 94-17-138, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-331-165 Clinical records. [Statutory Authority: RCW 70.127.120, 94-17-138, § 246-331-165, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-331-165, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-31-165, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-175 Parenteral product services. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-331-175, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-31-175, filed 6/7/89.] Repealed by 94-17-138, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-331-185 Medical supplies—Equipment services. [Statutory Authority: RCW 70.127.120, 94-17-138, § 246-331-185, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-331-185, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-31-185, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-331-990 Fees. [Statutory Authority: RCW 70.127.090, 43.20B.110, 43.70.250, 01-22-062, § 246-331-990, filed 11/1/01, effective 12/2/01. Statutory Authority: RCW 70.127.090, 43.02B.020 [43.20B.020], 43.70.110 and 43.70.250, 98-13-036, § 246-331-990, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 43.70.110, 43.70.250 and 70.127.090, 97-15-096, § 246-331-990, filed 7/21/97, effective 8/21/97. Statutory Authority: RCW 43.70.110 and 43.70.250, 96-12-025, § 246-331-990, filed 5/30/96, effective 6/30/96. Statutory Authority: RCW 43.70.250, 43.70.110 and 43.20B.020, 95-12-097, § 246-331-990, filed 6/7/95, effective 7/8/95. Statutory Authority: RCW 70.127.120, 94-17-138, § 246-331-990, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.090, 93-21-034, § 246-331-990, filed 10/15/93, effective 10/28/93. Statutory Authority: RCW 43.70.250, 92-15-084 (Order 288), § 246-331-990, filed 7/16/92, effective 8/16/92. Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-331-990, filed 12/27/90, effective 1/31/91.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- Reviser's note: Later promulgation, see chapter 246-335 WAC.
- Chapter 246-333**
APPROVAL OF EYE BANKS
- 246-333-010 Definitions. [Statutory Authority: RCW 43.70.040 and 68.50.280, 92-02-018 (Order 224), § 246-333-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-333-010, filed 12/27/90, effective 1/31/91; Order 134, § 248-33-020, filed 10/21/76.] Repealed by 02-15-164, filed 7/23/02, effective 8/23/02. Statutory Authority: RCW 68.50.630.
- 246-333-020 Approval process. [Statutory Authority: RCW 43.70.040, 68.50.280 and 34.05.220, 92-02-018 (Order 224), § 246-333-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-333-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050 and chapter 34.05 RCW, 90-05-038 (Order 034), § 248-33-040, filed 2/14/90, effective 3/17/90; Order 134, § 248-33-040, filed 10/21/76.] Repealed by 02-15-164, filed 7/23/02, effective 8/23/02. Statutory Authority: RCW 68.50.630.
- 246-333-030 HIV/AIDS education and training. [Statutory Authority: RCW 43.70.040, 68.50.280 and 70.24.310, 92-02-018 (Order 224), § 246-333-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-333-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 91-02-049 (Order 121), recodified as § 246-333-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-010, filed 12/27/90, effective 1/31/91; Regulation .112.010, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- 246-334-010 Definitions. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-010, filed 12/27/90, effective 1/31/91; Regulation .112.010, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- 246-334-020 Approval required for tissue preservation. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-020, filed 12/27/90, effective 1/31/91; Regulation .112.010, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- 246-334-030 Approval required for tissue preservation—Provisions for approval. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-030, filed 12/27/90, effective 1/31/91; Regulation .112.030, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- 246-334-040 Approval required for tissue preservation—Exemptions from approval. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-040, filed 12/27/90, effective 1/31/91; Regulation .112.040, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- 246-334-050 Records. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-050, filed 12/27/90, effective 1/31/91; Regulation .112.050, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- 246-334-060 Labels. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-334-060, filed 12/27/90, effective 1/31/91; Regulation .112.060, filed 2/18/66.] Repealed by 92-02-019 (Order 225B), filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.
- Chapter 246-336**
HOME CARE AGENCY RULES
- 246-336-001 Purpose and scope. [Statutory Authority: RCW 70.127.120, 94-17-137, § 246-336-001, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-336-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-36-005, filed 6/7/89.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-336-010 Definitions. [Statutory Authority: RCW 70.127.120, 94-17-137, § 246-336-010, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.270, 92-02-018 (Order 224), § 246-336-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-336-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040, 89-12-077 (Order 2790), § 248-36-015, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-025 Licensure—Initial, renewal, transfer. [Statutory Authority: RCW 70.127.120, 94-17-137, § 246-336-025, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.270, 92-02-018 (Order 224), § 246-336-025, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-336-025, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW,

- RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-36-025, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-025, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-030 Deemed status. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-030, filed 8/22/94, effective 9/22/94.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-035 Responsibilities and rights—Licensee and department. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-035, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120, 70.127.270 and 34.05.220. 92-02-018 (Order 224), § 246-336-035, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-035, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-36-035, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-035, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-045 Civil fines. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-045, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-36-045, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-045, filed 6/7/89.] Repealed by 94-17-137, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-336-055 License action and/or civil fine—Notice—Adjudicative proceeding. [Statutory Authority: RCW 70.127.120, 70.127.270 and 34.05.220. 92-02-018 (Order 224), § 246-336-055, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-055, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.126.040. 90-06-019 (Order 039), § 248-36-055, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-055, filed 6/7/89.] Repealed by 94-17-137, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120.
- 246-336-065 General requirements. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-065, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-065, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-065, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-077 Participant bill of rights. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-077, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-077, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-077, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-085 Organization and administration. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-085, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-085, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-085, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-095 Personnel, contractors and volunteers. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-095, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-095, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-095, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-100 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-100, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.43.842, 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-336-100, filed 7/26/93, effective 8/26/93.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-105 HIV/AIDS education and training. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-105, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120, 70.127.270 and 70.24.310. 92-02-018 (Order 224), § 246-336-105, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-105, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-105, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-115 Participant care policies and procedures. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-115, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-115, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-115, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-125 Supervision and coordination of services. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-125, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.270. 92-02-018 (Order 224), § 246-336-125, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-125, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-125, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-135 Home care plan of care. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-135, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-135, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-135, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-165 Participant care records. [Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-165, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-336-165, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.126.040. 89-12-077 (Order 2790), § 248-36-165, filed 6/7/89.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.
- 246-336-990 Fees. [Statutory Authority: RCW 70.127.090, 43.20B.110, 43.70.250. 01-22-062, § 246-336-990, filed 11/1/01, effective 12/2/01. Statutory Authority: RCW 70.127.090, 43.02B.020 [43.20B.020], 43.70.110 and 43.70.250. 98-13-036, § 246-336-990, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 43.70.110, 43.70.250 and 70.127.090. 97-15-096, § 246-336-990, filed 7/21/97, effective 8/21/97. Statutory Authority: RCW 43.70.110 and 43.70.250. 96-12-028, § 246-336-990, filed 5/30/96, effective 6/30/96. Statutory Authority: RCW 43.70.250, 43.70.110 and 43.20B.020. 95-12-097, § 246-336-990, filed 6/7/95, effective 7/8/95. Statutory Authority: RCW 70.127.120. 94-17-137, § 246-336-990, filed 8/22/94, effective 9/22/94. Statutory Authority: RCW 70.127.120 and 70.127.090. 93-21-034, § 246-336-990, filed 10/15/93, effective 10/28/93. Statutory Authority: RCW 43.70.250. 92-15-084 (Order 288), § 246-336-990, filed 7/16/92, effective 8/16/92. Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-336-990, filed 12/27/90, effective 1/31/91.] Repealed by 02-18-026, filed 8/23/02, effective 10/1/02. Statutory Authority: Chapter 70.127 RCW.

Reviser's note: Later promulgation, see chapter 246-335 WAC.

Chapter 246-340

SECOND TRIMESTER ABORTION FACILITIES

- 246-340-001 Purpose. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-001, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213, 86-08-002 (Order 2348), § 248-140-010, filed 3/20/86; Order 53, § 248-140-010, filed 2/8/71.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-010 Definitions. [Statutory Authority: RCW 43.70.040, 9.02.005 and 9.02.070, 92-02-018 (Order 224), § 246-340-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-010, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213, 86-08-002 (Order 2348), § 248-140-140, filed 3/20/86. Statutory Authority: RCW 9.02.070 and 43.20.050, 83-01-066 (Order 251), § 248-140-140, filed 12/15/82; Order 87, § 248-140-140, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-020 Facilities approved for termination of pregnancy. [Statutory Authority: RCW 43.70.040, 9.02.005 and 9.02.070, 92-02-018 (Order 224), § 246-340-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-020, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213, 86-08-002 (Order 2348), § 248-140-150, filed 3/20/86. Statutory Authority: RCW 9.02.070 and 43.20.050, 83-01-066 (Order 251), § 248-140-150, filed 12/15/82; Order 87, § 248-140-150, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-030 Certificate of approval required. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 9.02.070 and 43.20.050, 83-01-066 (Order 251), § 248-140-160, filed 12/15/82; Order 87, § 248-140-160, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-040 Application for certificate of approval. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 9.02.070 and 43.20.050, 83-01-066 (Order 251), § 248-140-170, filed 12/15/82; Order 87, § 248-140-170, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-050 Issuance, duration, and assignment of certificate of approval. [Statutory Authority: RCW 43.70.040, 9.02.005, 9.02.070 and 34.05.220, 92-02-018 (Order 224), § 246-340-050, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 9.02.070 and 43.20.050, 83-01-066 (Order 251), § 248-140-180, filed 12/15/82; Order 87, § 248-140-180, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-060 Form of application for certificate of approval and inspection. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-060, filed 12/27/90, effective 1/31/91; Order 87, § 248-140-190, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-070 Notice of decision—Adjudicative proceeding. [Statutory Authority: RCW 43.70.040, 9.02.005, 9.02.070 and 34.05.220, 92-02-018 (Order 224), § 246-340-070, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 42.20.050 and chapter 34.05 RCW, 90-05-038 (Order 034), § 248-140-200, filed 2/14/90, effective 3/17/90; Order 87, § 248-140-200, filed 6/12/73.] Repealed by 93-19-109 (Order 391),

- filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-080 Nonhospital facilities approved for termination of pregnancy during the second trimester. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 9.02.070 and 43.20.050, 83-01-066 (Order 251), § 248-140-210, filed 12/15/82; Order 87, § 248-140-210, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-085 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 43.43.830 through 43.43.842, 93-16-030 (Order 381), § 246-340-085, filed 7/26/93, effective 8/26/93.] Repealed by 98-09-120, filed 4/22/98, effective 5/23/98. Statutory Authority: RCW 43.43.830 through 43.43.842.
- 246-340-090 HIV/AIDS education and training. [Statutory Authority: RCW 43.70.040, 9.02.005, 9.02.070 and 70.24.310, 92-02-018 (Order 224), § 246-340-090, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.24.310, 89-21-038 (Order 3), § 248-140-215, filed 10/12/89, effective 11/12/89.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-100 Reporting of pregnancy terminations. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-100, filed 12/27/90, effective 1/31/91. Statutory Authority: 1985 c 213, 86-08-002 (Order 2348), § 248-140-220, filed 3/20/86. Statutory Authority: RCW 43.20.050, 80-14-063 (Order 202), § 248-140-220, filed 10/1/80; Order 87, § 248-140-220, filed 6/12/73.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-110 Disclosure of information. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-340-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20.050, 80-14-063 (Order 202), § 248-140-230, filed 10/1/80.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.
- 246-340-990 Fees. [Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-340-990, filed 12/27/90, effective 1/31/91.] Repealed by 93-19-109 (Order 391), filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 43.70.040.

Chapter 246-378

MOBILE HOME PARKS

- 246-378-010 Definition. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-378-010, filed 12/27/90, effective 1/31/91. Statutory Authority: 1981 c 304, 81-24-056 (Order 220), § 248-75-010, filed 12/1/81.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-378-020 Sewage disposal. [Statutory Authority: RCW 43.20.050 and 59.20.190, 92-02-019 (Order 225B), § 246-378-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-378-020, filed 12/27/90, effective 1/31/91. Statutory Authority: 1981 c 304, 81-24-056 (Order 220), § 248-75-020, filed 12/1/81.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-378-030 Water supply. [Statutory Authority: RCW 43.20.050 and 59.20.190, 92-02-019 (Order 225B), § 246-378-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-378-030, filed 12/27/90, effective 1/31/91. Statutory Authority: 1981 c 304, 81-24-056 (Order 220), § 248-75-030, filed 12/1/81.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-378-040 Refuse disposal. [Statutory Authority: RCW 43.20.050 and 59.20.190, 92-02-019 (Order 225B), § 246-378-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-378-040, filed 12/27/90, effective 1/31/91. Statutory Authority: 1981 c 304, 81-24-056 (Order 220), § 248-75-040, filed 12/1/81.] Repealed by 96-19-

- 043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-378-050 General sanitation. [Statutory Authority: RCW 43.20.050 and 59.20.190. 92-02-019 (Order 225B), § 246-378-050, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-378-050, filed 12/27/90, effective 1/31/91. Statutory Authority: 1981 c 304. 81-24-056 (Order 220), § 248-75-050, filed 12/1/81.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- Chapter 246-388**
RURAL HEALTH CARE FACILITY LICENSING RULES
- 246-388-001 Purpose. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-001, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-010 Definitions. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-010, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-010, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-020 License—Application—Denial—Appeal. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-020, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-030 Exemptions. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-030, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-040 Department approval of construction. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-040, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-050 Governing body and administration. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-050, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-060 Quality assurance. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-060, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-070 Personnel. [Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-388-070, filed 7/26/93, effective 8/26/93. Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-070, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-070, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-072 Criminal history, disclosure, and background inquiries. [Statutory Authority: RCW 43.43.830 through 43.43.842. 93-16-030 (Order 381), § 246-388-072, filed 7/26/93, effective 8/26/93.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-080 Infection control. [Statutory Authority: RCW 70.175.040, 70.175.100 and 70.24.310. 92-02-018 (Order 224), § 246-388-080, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-080, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-090 Abuse reports. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-090, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-100 Water supply. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-100, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-100, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-110 Plumbing. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-110, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-110, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-120 Staff facilities. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-120, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-130 Storage. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-130, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-140 Heating. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-140, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-150 Lighting and wiring. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-150, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-160 Emergency light and power. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-160, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-160, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-170 Ventilation. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-170, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-170, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-180 Corridors and doors. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-180, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-190 Carpets. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-190, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-200 Stairways, ramps, and elevators. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-200, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-210 Sewage, garbage, and waste. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-210, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-220 Medical gases. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-220, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-230 Core services. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-230, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-240 Core services—Twenty-four-hour emergency care. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-240, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-240, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].

- 246-388-250 Core service—Outpatient care. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-250, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-260 Core service—Laboratory. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-260, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-260, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-270 Core service—Radiology. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-270, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-270, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-280 Core service—Inpatient care. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-280, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-290 Core service—Low-risk maternal patient and newborn care. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-290, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-290, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-300 Support services and functions. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-300, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-310 Support services and functions—Materials processing and management. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-310, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-320 Support services and functions—Dietary. [Statutory Authority: RCW 70.175.040 and 70.175.100. 92-02-018 (Order 224), § 246-388-320, filed 12/23/91, effective 1/23/92. Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-320, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-330 Support services and functions—Housekeeping. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-330, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-340 Support services and functions—Laundry. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-340, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-350 Support services and functions—Maintenance. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-350, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-360 Support services and functions—Medical records. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-360, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-370 Support services and functions—Pharmacy service. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-370, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-380 Support services and functions—Intravenous care. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-380, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-390 Support services and functions—Discharge planning. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-390, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-400 Optional services. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-400, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-410 Optional—Long-term care. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-410, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-420 Optional—Occupational and physical therapy and respiratory care. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-420, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-430 Optional—Other diagnostic/therapeutic services. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-430, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-440 Optional—Surgical services. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-440, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-450 Optional—Anesthesia services. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-450, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].
- 246-388-990 Licensure fees. [Statutory Authority: Chapter 70.175 RCW. 91-02-014 (Order 123), § 246-388-990, filed 12/21/90, effective 1/21/91.] Repealed by 02-17-001, filed 8/7/02, effective 9/7/02. Statutory Authority: RCW 50.175.100 [70.175.100].

Chapter 246-420 SENTINEL BIRTH DEFECTS

- 246-420-001 Purpose. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.505. 85-21-038 (Order 295), § 248-164-001, filed 10/11/85.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-420-010 Definitions. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.505. 85-21-038 (Order 295), § 248-164-010, filed 10/11/85.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-420-020 General requirements. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.505. 85-21-038 (Order 295), § 248-164-020, filed 10/11/85.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-420-030 Information—Content of reports. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.505. 85-21-038 (Order 295), § 248-164-030, filed 10/11/85.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-420-040 Information to parents. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.505. 85-21-038 (Order 295), § 248-164-040, filed 10/11/85.]

- 246-420-050 Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050. Confidentiality of reports—Access to information—Use of information. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.050. 85-21-038 (Order 295), § 248-164-050, filed 10/11/85.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-420-060 Information on public and private services for handicapped. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-420-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.58.350 and 43.20.050. 85-21-038 (Order 295), § 248-164-060, filed 10/11/85.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.

**Chapter 246-430
CANCER REPORTING**

- 246-430-001 Purpose. [Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-001, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.
- 246-430-010 Definitions. [Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-010, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.
- 246-430-020 Cancer case identification. [Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-020, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.
- 246-430-030 Data collection requirements. [Statutory Authority: RCW 70.54.270 and 43.70.040. 96-13-027, § 246-430-030, filed 6/11/96, effective 7/12/96. Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-030, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.
- 246-430-040 Form, frequency, and format for reporting. [Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-040, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.
- 246-430-050 Data quality assurance. [Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-050, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.
- 246-430-060 Access and release of information. [Statutory Authority: RCW 70.54.230 through 70.54.270. 92-01-050 (Order 209), § 246-430-060, filed 12/10/91, effective 1/10/92.] Repealed by 01-04-086, filed 2/7/01, effective 3/10/01. Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130.

**Chapter 246-450
HOSPITAL DATA—PUBLIC RECORDS**

- 246-450-001 Purpose. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-001, filed 12/27/90, effective 1/31/91; Order 73-01, § 261-06-010, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-010 Definitions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-010, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-020, filed 2/28/83; Order 73-01, § 261-06-020, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-020 Public records available. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-020, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 84-20-066 (Order 84-

- 05, Resolution No. 84-05), § 261-06-030, filed 10/1/84; 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-030, filed 2/28/83; Order 73-01, § 261-06-030, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-030 Public records officer. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 84-20-066 (Order 84-05, Resolution No. 84-05), § 261-06-040, filed 10/1/84; Order 73-01, § 261-06-040, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-040 Office hours. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-040, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-050, filed 2/28/83; Order 73-01, § 261-06-050, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-050 Requests for public records. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-050, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-060, filed 2/28/83; Order 73-01, § 261-06-060, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-060 Inspection and copying. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 42.17.250 through 42.17.340 and chapter 70.39 RCW. 87-22-005 (Order 87-03, Resolution No. 87-03), § 261-06-070, filed 10/23/87. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-070, filed 2/28/83; Order 73-01, § 261-06-070, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-070 Exemptions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 42.17.250 through 42.17.340 and chapter 70.39 RCW. 87-22-005 (Order 87-03, Resolution No. 87-03), § 261-06-080, filed 10/23/87. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-080, filed 2/28/83; Order 73-01, § 261-06-080, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-080 Review of denials of public records requests. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 42.17.250 through 42.17.340 and chapter 70.39 RCW. 87-22-005 (Order 87-03, Resolution No. 87-03), § 261-06-090, filed 10/23/87. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-090, filed 2/28/83; Order 73-01, § 261-06-090, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-090 Protection of public records. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-090, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-06-100, filed 2/28/83; Order 73-01, § 261-06-100, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-450-100 Records index. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-450-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 42.17.250 through 42.17.340 and chapter 70.39 RCW. 87-22-005 (Order 87-03, Resolution No. 87-03), § 261-06-110, filed 10/23/87; Order 73-01, § 261-06-110, filed 1/11/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.

Chapter 246-452

HOSPITAL PRICE INFORMATION REPORTING

- 246-452-001 Purpose. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-001, filed 12/27/90, effective 1/31/91; Order 76-01, § 261-12-010, filed 2/13/76; Order 74-07, § 261-12-010, filed 5/10/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-010 Definitions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-010, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 84-20-066 (Order 84-05, Resolution No. 84-05), § 261-12-020, filed 10/1/84; Order 76-01, § 261-12-020, filed 2/13/76; Order 74-07, § 261-12-020, filed 5/10/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-020 Report of changes in or new prices—Reporting form. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-020, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-12-040, filed 2/28/83; Order 76-01, § 261-12-040, filed 2/13/76; Order 74-07, § 261-12-040, filed 5/10/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-030 Information regarding pricing policy. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-12-050, filed 2/28/83; Order 76-01, § 261-12-050, filed 2/13/76; Order 74-07, § 261-12-050, filed 5/10/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-040 Time deadline for submission of report. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-040, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.39 RCW. 83-06-036 (Order 83-02, Resolution No. 83-02), § 261-12-055, filed 2/28/83; Order 76-01, § 261-12-055, filed 2/13/76.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-050 Changes in contracts. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-050, filed 12/27/90, effective 1/31/91; Order 74-07, § 261-12-060, filed 5/10/74.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-060 Additional information request. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-060, filed 12/27/90, effective 1/31/91; Order 76-01, § 261-12-070, filed 2/13/76.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-070 Commission review and response to reports. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-070, filed 12/27/90, effective 1/31/91; Order 76-01, § 261-12-080, filed 2/13/76.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-452-080 Penalties for violation. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-452-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.39.180. 86-11-041 (Order 86-01, Resolution No. 86-01), § 261-12-090, filed 5/16/86.] Repealed by 94-12-089, filed 6/1/94, effective 7/2/94. Statutory Authority: Chapters 43.070 [43.70] and 70.170 RCW.
- 246-510-010 Definitions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-010, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-020, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-100 Administration. [Statutory Authority: 1989 c 19 § 214(3). 92-02-018 (Order 224), § 246-510-100, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-100, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-100, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-130 Application for funds. [Statutory Authority: 1989 c 19 § 214(3). 92-02-018 (Order 224), § 246-510-130, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-130, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-130, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-160 Eligibility. [Statutory Authority: 1989 c 19 § 214(3). 92-02-018 (Order 224), § 246-510-160, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-160, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-160, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-200 Allocation of state funds. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-200, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-200, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-300 Dispute resolution procedures. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-300, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-300, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-320 Audit review. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-510-320, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 1st ex.s. c 19 § 214. 90-04-082 (Order 027), § 248-170-320, filed 2/6/90, effective 3/9/90.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
- 246-510-400 Limitations on awards. [Statutory Authority: RCW 43.70.040 and 1989 sp.s. c 19 § 214. 92-14-055 (Order 282), § 246-510-400, filed 6/25/92, effective 6/30/92.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.

Chapter 246-520

KIDNEY CENTERS

- 246-520-001 Purpose. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-001, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-001, filed 12/27/90, effective 1/31/91; 80-06-065 (Order 198), § 248-30-070, filed 5/22/80.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-010 Definitions. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-010, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-010, filed 12/27/90, effective 1/31/91; 85-03-063 (Order 279), § 248-30-080, filed 1/15/85; 83-18-002 (Order 265), § 248-30-080, filed 8/25/83; 80-06-065 (Order 198), § 248-30-080, filed 5/22/80.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-020 Services. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-020, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as §

- 246-520-020, filed 12/27/90, effective 1/31/91; 80-06-065 (Order 198), § 248-30-090, filed 5/22/80.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-030 Reimbursement. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-030, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-030, filed 12/27/90, effective 1/31/91; 83-18-002 (Order 265), § 248-30-100, filed 8/25/83; 80-06-065 (Order 198), § 248-30-100, filed 5/22/80.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-040 Eligibility. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-040, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-040, filed 12/27/90, effective 1/31/91; 85-03-063 (Order 279), § 248-30-110, filed 1/15/85; 83-18-002 (Order 265), § 248-30-110, filed 8/25/83. Statutory Authority: RCW 43.20.050 and SB 5021. 82-19-070 (Order 243), § 248-30-110, filed 9/20/82. Statutory Authority: RCW 43.20.050. 80-06-065 (Order 198), § 248-30-110, filed 5/22/80.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-050 Transfer of resources without adequate consideration. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-050, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-050, filed 12/27/90, effective 1/31/91; 85-03-063 (Order 279), § 248-30-115, filed 1/15/85.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-060 Fiscal information. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-060, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-060, filed 12/27/90, effective 1/31/91; 80-06-065 (Order 198), § 248-30-120, filed 5/22/80.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-520-070 Procedures for eligibility determination. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-520-070, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-520-070, filed 12/27/90, effective 1/31/91; 85-03-063 (Order 279), § 248-30-130, filed 1/15/85; 83-18-002 (Order 265), § 248-30-130, filed 8/25/83.] Repealed by 94-05-052, filed 2/10/94, effective 3/13/94. Statutory Authority: RCW 43.20.050
- 246-806-020 Colleges—Policy. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-020, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 18.25.025. 81-05-004 (Order PL 371), § 114-12-011, filed 2/6/81.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-030 Accreditation of colleges—Procedure. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-030, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 18.25.025. 81-05-004 (Order PL 371), § 114-12-031, filed 2/6/81.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-040 Colleges—Educational standards required for accreditation. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-040, filed 2/12/91, effective 3/15/91; 87-24-063 (Order PM 692), § 114-12-041, filed 12/1/87. Statutory Authority: RCW 18.25.025. 83-01-028 (Order PL 414), § 114-12-041, filed 12/8/82; 81-22-078 (Order PL 385), § 114-12-041, filed 11/4/81; 81-05-004 (Order PL 371), § 114-12-041, filed 2/6/81.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-050 Examination review and appeal procedures. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-050, filed 2/12/91, effective 3/15/91; 86-06-043 (Order PL 582), § 114-12-115, filed 3/4/86.] Repealed by 92-17-026 (Order 297B), filed 8/11/92, effective 9/11/92. Statutory Authority: RCW 18.25.017.
- 246-806-060 Examinations. [Statutory Authority: RCW 18.25.017. 92-17-026 (Order 297B), § 246-806-060, filed 8/11/92, effective 9/11/92; 91-05-026 (Order 111B), recodified as § 246-806-060, filed 2/12/91, effective 3/15/91; 89-18-085 (Order PM 861), § 114-12-126, filed 9/6/89, effective 10/7/89.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-070 Chiropractic examination scores. [Statutory Authority: RCW 18.25.017. 92-17-026 (Order 297B), § 246-806-070, filed 8/11/92, effective 9/11/92; 91-05-026 (Order 111B), recodified as § 246-806-070, filed 2/12/91, effective 3/15/91; 89-21-058, § 114-12-132, filed 10/16/89, effective 11/16/89; 87-24-063 (Order PM 692), § 114-12-132, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-075 Adjudicative proceedings—Procedural rules for the board of chiropractic examiners. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-20-061, § 246-806-075, filed 10/1/93, effective 11/1/93.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-080 Licensees residing and practicing out-of-state—Continuing education requirements. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-080, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 18.25.017 and 18.25.070. 80-11-073 (Order PL 355), § 114-12-150, filed 8/20/80.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-085 Thirty-day permit. [Statutory Authority: RCW 18.25.017. 92-17-026 (Order 297B), § 246-806-085, filed 8/11/92, effective 9/11/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
- 246-806-090 Board approved continuing education. [Statutory Authority: RCW 18.25.017. 92-17-026 (Order 297B), § 246-806-090, filed 8/11/92, effective 9/11/92; 91-05-026 (Order 111B), recodified as § 246-806-090, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 18.25.070 and 18.25.075. 90-22-036 (Order 096B), § 114-12-155, filed 11/1/90, effective 12/2/90. Statutory Authority: RCW 18.25.017. 89-18-086, § 114-12-155, filed 9/6/89, effective 10/7/89; 86-06-043 (Order PL 582), § 114-12-155, filed 3/4/86.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.

Chapter 246-610

CYTOGENETIC LABORATORY SERVICES

- 246-610-010 Definitions. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-610-010, filed 12/27/90, effective 1/31/91; 83-12-049 (Order 258), § 248-160-010, filed 6/1/83.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-610-020 Performance of cytogenetic laboratory procedures. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-610-020, filed 12/27/90, effective 1/31/91; 83-12-049 (Order 258), § 248-160-020, filed 6/1/83.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-610-030 Fees. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-610-030, filed 12/27/90, effective 1/31/91; 83-12-049 (Order 258), § 248-160-030, filed 6/1/83.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-610-040 Eligibility for reduced fee or no-fee services. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-610-040, filed 12/27/90, effective 1/31/91; 83-12-049 (Order 258), § 248-160-040, filed 6/1/83.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.

Chapter 246-806

CHIROPRACTIC, DOCTORS OF—BOARD OF CHIROPRACTIC EXAMINERS

- 246-806-010 Definitions. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-010, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW

246-806-100	Prior approval not required. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-09-055 (Order 356B), § 246-806-100, filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-100, filed 2/12/91, effective 3/15/91; 89-18-085 (Order PM 861), § 114-12-164, filed 9/6/89, effective 10/7/89.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-806-990	Chiropractic fees. [Statutory Authority: RCW 43.70.250. 92-07-017 (Order 251), § 246-806-990, filed 3/9/92, effective 4/9/92; 91-21-096 (Order 207), § 246-806-990, filed 10/21/91, effective 11/21/91. Statutory Authority: RCW 43.70.040. 91-05-031 (Order 136), recodified as § 246-806-990, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 43.70.250. 90-04-094 (Order 029), § 114-12-136, filed 2/7/90, effective 3/10/90. Statutory Authority: RCW 43.24.086. 87-10-028 (Order PM 650), § 114-12-136, filed 5/1/87; 83-22-060 (Order PL 446), § 114-12-136, filed 11/2/83. Formerly WAC 114-12-135.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-110	License renewal—Affidavit of compliance with continuing education requirements. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-09-055 (Order 356B), § 246-806-110, filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-110, filed 2/12/91, effective 3/15/91; 89-18-085 (Order PM 861), § 114-12-170, filed 9/6/89, effective 10/7/89; 88-17-084 (Order PM 764), § 114-12-170, filed 8/22/88. Statutory Authority: RCW 18.25.017 and 18.25.070. 80-11-073 (Order PL 355), § 114-12-170, filed 8/20/80.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	Chapter 246-807 CHIROPRACTIC, DOCTORS OF—CHIROPRACTIC DISCIPLINARY BOARD	
246-806-120	Exemptions. [Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-120, filed 2/12/91, effective 3/15/91; 80-17-019 (Order PL 362), § 114-12-180, filed 11/13/80.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-020	Privileged communications. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-020, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-010, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-130	Lapsed and inactive licenses—Requirements for reinstating or activating a license. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-09-055 (Order 356B), § 246-806-130, filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-130, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 18.25.070 and 18.25.075. 90-22-036 (Order 096B), § 114-12-190, filed 11/1/90, effective 12/2/90. Statutory Authority: RCW 18.25.017. 89-18-085 (Order PM 861), § 114-12-190, filed 9/6/89, effective 10/7/89.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-030	Patient abandonment. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-030, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-020, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-140	AIDS prevention and information education requirements. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-09-055 (Order 356B), § 246-806-140, filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.25.017. 91-05-026 (Order 111B), recodified as § 246-806-140, filed 2/12/91, effective 3/15/91. Statutory Authority: RCW 70.24.270. 88-23-060 (Order PM 799), § 114-12-200, filed 11/15/88.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-040	Consultation. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-040, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-030, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-150	Temporary permits—Recognized jurisdictions. [Statutory Authority: RCW 18.26.110. 92-02-022 (Order 229B), § 246-806-150, filed 12/23/91, effective 1/23/92.] Repealed by 93-09-055 (Order 356B), filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.25.017 and 18.25.020.	246-807-050	Unethical requests. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-050, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-040, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-160	Temporary permits—Issuance and duration. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-09-055 (Order 356B), § 246-806-160, filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.26.110. 92-02-022 (Order 229B), § 246-806-160, filed 12/23/91, effective 1/23/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-060	Patient welfare. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-060, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-050, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-170	Licensure by endorsement. [Statutory Authority: RCW 18.26.110. 92-02-022 (Order 229B), § 246-806-170, filed 12/23/91, effective 1/23/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-070	Patient disclosure. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-070, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-060, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-180	Preceptor or direct supervisory doctor. [Statutory Authority: RCW 18.25.017. 92-17-026 (Order 297B), § 246-806-180, filed 8/11/92, effective 9/11/92. Statutory Authority: RCW 18.26.110. 92-02-022 (Order 229B), § 246-806-180, filed 12/23/91, effective 1/23/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-080	Degree of skill. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-080, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-070, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-806-190	Registration of chiropractic x-ray technicians. [Statutory Authority: RCW 18.25.017 and 18.25.020. 93-09-055 (Order 356B), § 246-806-190, filed 4/19/93, effective 5/20/93. Statutory Authority: RCW 18.26.110. 92-02-022 (Order 229B), § 246-806-190, filed 12/23/91, effective 1/23/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96.	246-807-090	Illegal practitioners. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-090, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-090, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-100	Excessive professional charges. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-100, filed 2/20/91, effective 3/23/91; 84-01-054 (Order PL 453), § 113-10-100, filed 12/16/83; Order PL 235, § 113-10-100, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-110	Disparaging other practitioners. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-110, filed 2/20/91, effective 3/23/91; Order PL 235, § 113-10-110, filed 12/31/75.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-115	Adjudicative proceedings—Procedural rules for the chiropractic disciplinary board. [Statutory Authority: RCW 18.26.110. 94-08-053, § 246-807-115, filed

	4/1/94, effective 5/2/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-200	Acupuncture. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-200, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.130.050(1). 87-05-064 (Order PM 640), § 113-12-115, filed 2/18/87; Order PL 235, § 113-12-115, filed 12/31/75. Formerly WAC 113-12-110.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-120	Identification. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-120, filed 2/20/91, effective 3/23/91; 84-01-054 (Order PL 453), § 113-12-010, filed 12/16/83; Order PL-137, § 113-12-010, filed 11/13/72; Order 8, § 113-12-010, filed 9/9/68.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-210	Future care contracts prohibited. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-210, filed 2/20/91, effective 3/23/91; 84-01-054 (Order PL 453), § 113-12-120, filed 12/16/83. Statutory Authority: RCW 18.26.110 (1) and (2). 79-10-099 (Order PL 315), § 113-12-120, filed 9/25/79; Order PL-145, § 113-12-120, filed 6/6/73.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-125	License renewal form. [Statutory Authority: RCW 18.26.110. 94-16-012, § 246-807-125, filed 7/21/94, effective 8/21/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-220	Ethical standards—Prohibited publicity and advertising. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-220, filed 2/20/91, effective 3/23/91; 87-24-064 (Order PM 693), § 113-12-150, filed 12/1/87; 84-01-054 (Order PL 453), § 113-12-150, filed 12/16/83; 80-11-043 (Order PL-352, Resolution No. 8-80), § 113-12-150, filed 8/18/80. Statutory Authority: RCW 18.26.110 (1) and (2). 79-10-099 (Order PL 315), § 113-12-150, filed 9/25/79. Statutory Authority: RCW 18.26.110(2). 78-05-052 (Order PL 287, Resolution No. 78-142), § 113-12-150, filed 4/25/78.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-130	Health food store ownership. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-130, filed 2/20/91, effective 3/23/91; 86-10-039 (Order PL 591), § 113-12-075, filed 5/5/86.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-230	Ethical standards—Honoring of publicity and advertisements. [Statutory Authority: RCW 18.26.110. 91-24-052 (Order 220B), § 246-807-230, filed 11/27/91, effective 12/28/91; 91-05-095 (Order 110B), recodified as § 246-807-230, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110(2). 78-05-052 (Order PL 287, Resolution 78-142), § 113-12-165, filed 4/25/78.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-135	Cooperation with investigation. [Statutory Authority: RCW 18.26.110. 94-16-012, § 246-807-135, filed 7/21/94, effective 8/21/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-240	Ethical standards—Prohibited transactions. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-240, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110(2). 78-05-052 (Order PL 287, Resolution 78-142), § 113-12-170, filed 4/25/78.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-140	Vitamins, minerals and food supplements. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-140, filed 2/20/91, effective 3/23/91; 86-10-039 (Order PL 591), § 113-12-080, filed 5/5/86. Statutory Authority: RCW 18.26.110(2). 84-23-033 (Order PL 497), § 113-12-080, filed 11/15/84; Order 8, § 113-12-080, filed 9/9/68.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-250	Ethical standards—Professional notices, letterheads, cards, and mailings. [Statutory Authority: RCW 18.26.110. 91-24-052 (Order 220B), § 246-807-250, filed 11/27/91, effective 12/28/91; 91-05-095 (Order 110B), recodified as § 246-807-250, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110(2). 78-05-052 (Order PL 287, Resolution 78-142), § 113-12-175, filed 4/25/78.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-150	Pelvic or prostate examination prohibited. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-150, filed 2/20/91, effective 3/23/91; 84-01-054 (Order PL 453), § 113-12-085, filed 12/16/83.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-260	Ethical standards—Suggestion of need of chiropractic services. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-260, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110(2). 78-05-052 (Order PL 287, Resolution 78-142), § 113-12-180, filed 4/25/78.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-160	Intravaginal adjustment restricted. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-160, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.130.050(1). 87-05-064 (Order PM 640), § 113-12-087, filed 2/18/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-270	Public testimonial advertising. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-270, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110(2). 84-23-033 (Order PL 497), § 113-12-190, filed 11/15/84.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-170	Billing. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-170, filed 2/20/91, effective 3/23/91; 89-01-017 (Order PM 806), § 113-12-101, filed 12/9/88, effective 2/1/89.] Repealed by 91-10-051 (Order 162B), filed 4/26/91, effective 5/27/91. Statutory Authority: RCW 18.26.110 and 18.130.050.	246-807-280	Full disclosure of cost of services. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-280, filed 12/1/93, effective 1/1/94. Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-280, filed 2/20/91, effective 3/23/91; 89-16-095 (Order PM 852), § 113-12-195, filed 8/2/89, effective 9/2/89; 87-24-064 (Order PM 693), § 113-12-195, filed 12/1/87. Statutory Authority: RCW 18.130.050(1). 87-05-064 (Order PM 640), § 113-12-195, filed 2/18/87. Statutory Authority: RCW 18.26.110(2). 84-23-033 (Order PL 497), § 113-12-195,
246-807-171	Billing. [Statutory Authority: RCW 18.26.110 and 18.130.050. 91-10-051 (Order 162B), § 246-807-171, filed 4/26/91, effective 5/27/91.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.		
246-807-173	Documentation of care. [Statutory Authority: RCW 18.26.110. 94-16-012, § 246-807-173, filed 7/21/94, effective 8/21/94. Statutory Authority: RCW 18.26.110 and 18.130.050. 91-10-051 (Order 162B), § 246-807-173, filed 4/26/91, effective 5/27/91.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.		
246-807-180	Radiographic standards. [Statutory Authority: RCW 18.26.110. 91-24-052 (Order 220B), § 246-807-180, filed 11/27/91, effective 12/28/91; 91-05-095 (Order 110B), recodified as § 246-807-180, filed 2/20/91, effective 3/23/91; 89-01-017 (Order PM 806), § 113-12-103, filed 12/9/88, effective 2/1/89.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.		
246-807-190	Delegation of services to auxiliary staff and graduate doctors of chiropractic. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-190, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110 and 18.130.050. 90-22-037 (Order 097B), § 113-12-104, filed 11/1/90, effective 12/2/90.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.		

	filed 11/15/84.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-380	Professional liability carriers. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-380, filed 2/20/91, effective 3/23/91; 87-24-064 (Order PM 693), § 113-12-340, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-290	Improper billing practices. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-290, filed 12/1/93, effective 1/1/94. Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-290, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.130.050(1). 87-05-064 (Order PM 640), § 113-12-197, filed 2/18/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-390	Courts. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-390, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.130.070. 87-24-064 (Order PM 693), § 113-12-350, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-300	Scope of practice—Revocation or suspension of license authorized for practice outside scope. [Statutory Authority: RCW 18.26.110. 94-16-012, § 246-807-300, filed 7/21/94, effective 8/21/94; 92-24-042 (Order 319B), § 246-807-300, filed 11/25/92, effective 12/26/92; 91-05-095 (Order 110B), recodified as § 246-807-300, filed 2/20/91, effective 3/23/91; 90-16-059 (Order 077) § 113-12-200, filed 7/27/90, effective 8/27/90; 88-17-100 (Order PM 765), § 113-12-200, filed 8/23/88; 87-24-064 (Order PM 693), § 113-12-200, filed 12/1/87. Statutory Authority: RCW 18.26.110(2). 84-23-033 (Order PL 497), § 113-12-200, filed 11/15/84. Statutory Authority: RCW 18.26.110. 81-13-002 (Order PL 380), § 113-12-200, filed 6/4/81.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-395	State and federal agencies. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-395, filed 12/1/93, effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-396	Professional standards review organizations. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-396, filed 12/1/93, effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-400	Peer review membership. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-400, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-310	Clinically necessary x-rays. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-310, filed 2/20/91, effective 3/23/91. Statutory Authority: RCW 18.26.110(2). 84-23-033 (Order PL 497), § 113-12-210, filed 11/15/84.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-410	Classification of chiropractic procedures and instrumentation. [Statutory Authority: RCW 18.26.110 and 18.130.050. 91-10-051 (Order 162B), § 246-807-410, filed 4/26/91, effective 5/27/91.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-311	Sexual misconduct. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-311, filed 12/1/93, effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-420	Peer review qualifications for appointment. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-420, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-320	Records and x-rays and withdrawal from practice—Maintenance and retention of patient records. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-320, filed 12/1/93, effective 1/1/94. Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-320, filed 2/20/91, effective 3/23/91; 89-01-017 (Order PM 806), § 113-12-220, filed 12/9/88, effective 2/1/89.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-430	Peer review conflict of interest. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-430, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-330	Duties of a chiropractor who retires or withdraws from practice. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-330, filed 2/20/91, effective 3/23/91; 89-01-017 (Order PM 806), § 113-12-230, filed 12/9/88, effective 2/1/89.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-440	Peer review quorum. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-440, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-340	Mandatory reporting definitions. [Statutory Authority: RCW 18.26.110. 91-24-052 (Order 220B), § 246-807-340, filed 11/27/91, effective 12/28/91; 91-05-095 (Order 110B), recodified as § 246-807-340, filed 2/20/91, effective 3/23/91; 87-24-064 (Order PM 693), § 113-12-300, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-450	Peer review conduct of reviews. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-450, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-350	Mandatory reporting. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-350, filed 2/20/91, effective 3/23/91; 87-24-064 (Order PM 693), § 113-12-310, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-460	Mediation. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-460, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-360	Chiropractic associations or societies. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-360, filed 2/20/91, effective 3/23/91; 87-24-064 (Order PM 693), § 113-12-320, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-470	Disciplinary board conflict of interest. [Statutory Authority: RCW 18.26.110. 92-01-070 (Order 227B), § 246-807-470, filed 12/16/91, effective 1/16/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
246-807-370	Insurance carriers. [Statutory Authority: RCW 18.26.110. 91-05-095 (Order 110B), recodified as § 246-807-370, filed 2/20/91, effective 3/23/91; 87-24-064 (Order PM 693), § 113-12-330, filed 12/1/87.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.	246-807-480	Peer review fees. [Statutory Authority: RCW 18.26.110 and 18.26.340. 92-11-009 (Order 270B), § 246-807-480, filed 5/11/92, effective 6/11/92.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-500	Philosophy governing voluntary substance abuse monitoring programs. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-500, filed 12/1/93, effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-510	Terms used in WAC 246-807-500 through 246-807-530. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-510, filed 12/1/93, effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.
		246-807-520	Approval of substance abuse monitoring programs. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-520, filed 12/1/93,

effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.

246-807-530

Participation in approved substance abuse monitoring program. [Statutory Authority: RCW 18.26.110 and chapter 18.26 RCW. 93-24-107, § 246-807-530, filed 12/1/93, effective 1/1/94.] Repealed by 96-16-074, filed 8/6/96, effective 9/6/96. Statutory Authority: Chapter 18.25 RCW.

Chapter 246-816

DENTISTS—DENTAL DISCIPLINARY BOARD

246-816-015

Adjudicative proceedings—Procedural rules for the dental disciplinary board. [Statutory Authority: RCW 18.32.640. 94-12-038, § 246-816-015, filed 5/25/94, effective 6/25/94.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-020

Display of licenses. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-020, filed 12/27/90, effective 1/31/91; 81-06-013 (Order PL 373), § 308-37-100, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-030

Maintenance and retention of patient records. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-030, filed 12/27/90, effective 1/31/91; 82-07-043 (Order PL 392), § 308-37-110, filed 3/17/82; 81-06-013 (Order PL 373), § 308-37-110, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-040

Report of patient injury or mortality. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-040, filed 12/27/90, effective 1/31/91; 81-06-013 (Order PL 373), § 308-37-120, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-050

Recording requirements for all prescription drugs. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-050, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.640(1). 83-04-050 (Order PL 423), § 308-37-130, filed 2/1/83; 81-06-013 (Order PL 373), § 308-37-130, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-060

Recording requirement for scheduled drugs. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.640(1). 83-04-050 (Order PL 423), § 308-37-135, filed 2/1/83.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-070

Prescribing, dispensing or distributing drugs. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-070, filed 12/27/90, effective 1/31/91; 81-06-013 (Order PL 373), § 308-37-140, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-075

Nondiscrimination. [Statutory Authority: RCW 18.32.640, 18.130.050(12) and 18.130.040 (3)(b)(iii). 91-03-109 (Order 127B), § 246-816-075, filed 1/22/91, effective 2/22/91.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-080

Patient abandonment. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.640(1). 84-21-072 (Order PL 490), § 308-37-150, filed 10/17/84; 84-05-070 (Order PL 460), § 308-37-150, filed 2/22/84.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-090

Representation of care, fees, and records. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.640(1). 85-05-040 (Order PL 520), § 308-37-160, filed 2/19/85.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-100

Disclosure of provider services. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as

246-816-110

§ 246-816-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.640(1). 85-05-040 (Order PL 520), § 308-37-170, filed 2/19/85.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

Disclosure of membership affiliation. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.640(1). 85-05-040 (Order PL 520), § 308-37-180, filed 2/19/85.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-120

Specialty representation. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-120, filed 12/27/90, effective 1/31/91; 89-08-095 (Order PM 826), § 308-37-190, filed 4/5/89. Statutory Authority: RCW 18.32.640(1). 85-05-040 (Order PL 520), § 308-37-190, filed 2/19/85.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-130

Maintenance of records. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-130, filed 12/27/90, effective 1/31/91; Order, § 1, filed 3/23/60.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-140

Prescriptions. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.32.040. 82-04-024 (Order PL 391), § 308-40-020, filed 1/26/82; Order, § 2, filed 3/23/60.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-150

A rule applicable to dental technicians. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-150, filed 12/27/90, effective 1/31/91; Order, filed 3/23/60.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-201

Purpose. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-201, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-201, filed 12/27/90, effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-100, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-210

Definitions for WAC 246-816-201 through 246-816-260. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-210, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-210, filed 12/27/90, effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-110, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-220

Acts that may be performed by unlicensed persons. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-220, filed 12/27/90, effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-120, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-225

An act that may be performed by unlicensed persons outside the treatment facility. [Statutory Authority: RCW 18.32.640, 18.32.020 and 18.32.030. 93-19-111 (Order 400B), § 246-816-225, filed 9/20/93, effective 10/21/93.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-230

Acts that may not be performed by unlicensed persons. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-230, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-230, filed 12/27/90, effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-130, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

246-816-240

Acts that may be performed by licensed dental hygienists under general supervision. [Statutory Authority: RCW 18.32.640. 92-20-036 (Order 307B), § 246-816-240, filed 9/29/92, effective 10/30/92; 91-02-048 (Order 106B), recodified as § 246-816-240, filed 12/27/90,

- effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-140, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-250 Acts that may be performed by licensed dental hygienists under close supervision. [Statutory Authority: RCW 18.32.640. 92-20-036 (Order 307B), § 246-816-250, filed 9/29/92, effective 10/30/92. Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-250, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-250, filed 12/27/90, effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-150, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-260 Acts that may not be performed by dental hygienists. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-260, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-260, filed 12/27/90, effective 1/31/91; 81-17-054 (Order PL 382), § 308-38-160, filed 8/18/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-301 Purpose. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-301, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-301, filed 12/27/90, effective 1/31/91; 90-18-042 (Order 088), § 308-39-100, filed 8/29/90, effective 10/1/90; 81-06-013 (Order PL 373), § 308-39-100, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-310 Definitions for WAC 246-816-301 through 246-816-410. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-310, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-310, filed 12/27/90, effective 1/31/91; 90-18-042 (Order 088), § 308-39-110, filed 8/29/90, effective 10/1/90. Statutory Authority: RCW 18.32.640(1). 82-16-087 (Order PL 403), § 308-39-110, filed 8/4/82. Statutory Authority: RCW 18.32.640. 81-06-013 (Order PL 373), § 308-39-110, filed 2/20/81.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-320 Basic life support requirements. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-320, filed 12/27/90, effective 1/31/91; 90-18-042 (Order 088), § 308-39-125, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-330 Local anesthesia. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-330, filed 12/27/90, effective 1/31/91; 90-18-042 (Order 088), § 308-39-130, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-340 Nitrous oxide/oxygen sedation. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-340, filed 12/27/90, effective 1/31/91; 90-18-042 (Order 088), § 308-39-140, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-350 Conscious sedation with an oral agent. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-350, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-150, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-360 Conscious sedation with parenteral or multiple oral agents. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-360, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-360, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-160, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-370 General anesthesia (including deep sedation). [Statutory Authority: RCW 18.32.640. 93-19-112 (Order 399B), § 246-816-370, filed 9/20/93, effective 10/21/93. Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-370, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-370, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-170, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-380 Mandatory reporting of death or significant complication. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-380, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-180, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-390 Applications—Permits—Renewals for the administration of conscious sedation with multiple oral or parenteral agents or general anesthesia (including deep sedation). [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-390, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-390, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-190, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-400 Application of chapter 18.130 RCW. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-400, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-200, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-410 Effective date. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-410, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-410, filed 12/27/90, effective 1/31/91; 90-18-041 (Order 087), § 308-39-210, filed 8/29/90, effective 10/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-501 Intent. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-501, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.130.175 and 18.32.534. 90-16-099 (Order 076), § 308-25-290, filed 8/1/90, effective 9/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-510 Terms used in WAC 246-816-501 through 246-816-530. [Statutory Authority: RCW 18.32.640 and 18.130.050. 92-05-012 (Order 243B), § 246-816-510, filed 2/7/92, effective 3/9/92. Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-510, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.130.175 and 18.32.534. 90-16-099 (Order 076), § 308-25-310, filed 8/1/90, effective 9/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-520 Approval of substance abuse monitoring programs. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-520, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.130.175 and 18.32.534. 90-16-099 (Order 076), § 308-25-320, filed 8/1/90, effective 9/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-530 Participation in approved substance abuse monitoring program. [Statutory Authority: RCW 18.32.640. 91-02-048 (Order 106B), recodified as § 246-816-530, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.130.175 and 18.32.534. 90-16-099 (Order 076), § 308-25-330, filed 8/1/90, effective 9/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-701 Purpose. [Statutory Authority: RCW 18.32.640. 92-09-069 (Order 263B), § 246-816-701, filed 4/14/92, effective 5/15/92.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-710 Definitions. [Statutory Authority: RCW 18.32.640. 92-09-069 (Order 263B), § 246-816-710, filed 4/14/92, effective 5/15/92.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.

- 246-816-720 Use of barriers and sterilization techniques. [Statutory Authority: RCW 18.32.640. 92-09-069 (Order 263B), § 246-816-720, filed 4/14/92, effective 5/15/92.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-730 Management of single use items. [Statutory Authority: RCW 18.32.640. 92-09-069 (Order 263B), § 246-816-730, filed 4/14/92, effective 5/15/92.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-740 Effective date. [Statutory Authority: RCW 18.32.640. 92-09-069 (Order 263B), § 246-816-740, filed 4/14/92, effective 5/15/92.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-816-990 Dental anesthesia permit fees. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-816-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.250. 90-18-040 (Order 086), § 308-39-220, filed 8/29/90, effective 10/1/90.] Repealed by 95-16-122 and 96-01-083, filed 8/2/95 and 12/18/95, effective 9/1/95 and 1/18/96. Statutory Authority: RCW 43.70.040 and 18.32.035.
- Reviser's note:** Later promulgation, see chapter 246-817 WAC.
- Chapter 246-818**
DENTISTS—BOARD OF DENTAL EXAMINERS
- 246-818-015 Adjudicative proceedings—Procedural rules for the board of dental examiners. [Statutory Authority: RCW 18.32.035. 94-08-011, § 246-818-015, filed 3/28/94, effective 4/28/94.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-020 Examination eligibility and application. [Statutory Authority: RCW 18.32.035. 94-11-088, § 246-818-020, filed 5/17/94, effective 6/17/94; 92-01-122 (Order 228B), § 246-818-020, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-020, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.040 and 18.130.050. 88-13-131 (Order PM 740), § 308-40-101, filed 6/22/88. Statutory Authority: RCW 18.32.040. 82-04-024 (Order PL 391), § 308-40-101, filed 1/26/82. Statutory Authority: RCW 18.29.030 and 18.32.040. 81-08-043 (Order PL 374), § 308-40-101, filed 3/31/81; 80-05-063 (Order PL 342), § 308-40-101, filed 4/22/80. Statutory Authority: RCW 18.32.040. 79-04-011 (Order 295, Resolution No. 295), § 308-40-101, filed 3/13/79.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-030 Examination content. [Statutory Authority: RCW 18.32.035. 91-01-007 (Order 101B), recodified as § 246-818-030, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.040(4) and 18.32.120. 89-06-075 (Order PM 819), § 308-40-102, filed 3/1/89. Statutory Authority: RCW 18.32.040 and 18.130.050. 88-13-131 (Order PM 740), § 308-40-102, filed 6/22/88. Statutory Authority: RCW 18.32.040. 87-09-097 (Order PM 649), § 308-40-102, filed 4/22/87; 86-08-046 (Order PL 583), § 308-40-102, filed 3/27/86; 84-07-050 (Order PL 462), § 308-40-102, filed 3/21/84; 83-08-021 (Order PL 431), § 308-40-102, filed 3/29/83; 82-04-024 (Order PL 391), § 308-40-102, filed 1/26/82; 79-04-011 (Order 295, Resolution No. 295), § 308-40-102, filed 3/13/79.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-040 Dismissal from examination. [Statutory Authority: RCW 18.32.035. 91-01-007 (Order 101B), recodified as § 246-818-040, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.040 and 18.130.050. 88-13-131 (Order PM 740), § 308-40-103, filed 6/22/88. Statutory Authority: RCW 18.32.040. 82-04-024 (Order PL 391), § 308-40-103, filed 1/26/82.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-050 Examination results. [Statutory Authority: RCW 18.32.120. 91-14-087 (Order 180B), § 246-818-050, filed 7/1/91, effective 8/1/91. Statutory Authority: RCW 18.32.035. 91-01-007 (Order 101B), recodified as § 246-818-050, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.640. 89-01-083 (Order PM 809), § 308-40-104, filed 12/20/88. Statutory Authority: RCW 18.32.040. 85-16-113 (Order PL 547), § 308-40-104, filed 8/7/85; 84-11-025 (Order PL 467), § 308-40-104, filed 5/11/84; 82-04-024 (Order PL 391), § 308-40-104, filed 1/26/82.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-060 Practical examination review procedures. [Statutory Authority: RCW 18.32.035. 92-01-122 (Order 228B), § 246-818-060, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-060, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.040 and 18.32.120. 89-13-052 (Order PM 834), § 308-40-105, filed 6/19/89. Statutory Authority: RCW 18.32.040 and 18.130.050. 88-13-131 (Order PM 740), § 308-40-105, filed 6/22/88. Statutory Authority: RCW 18.32.040. 87-09-097 (Order PM 649), § 308-40-105, filed 4/22/87; 82-04-024 (Order PL 391), § 308-40-105, filed 1/26/82. Statutory Authority: RCW 18.29.030 and 18.32.040. 80-18-009 (Order 363), § 308-40-105, filed 11/24/80; 80-05-063 (Order PL 342), § 308-40-105, filed 4/22/80.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-070 Written examination review procedures. [Statutory Authority: RCW 18.32.035. 92-01-122 (Order 228B), § 246-818-070, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-070, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.040 and 18.32.120. 89-13-052 (Order PM 834), § 308-40-106, filed 6/19/89.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-080 Application for licensure—AIDS education requirements. [Statutory Authority: RCW 18.32.035. 92-01-122 (Order 228B), § 246-818-080, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-080, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 70.24.270. 90-08-011, § 308-40-107, filed 3/26/90, effective 4/26/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-090 Graduates of nonaccredited schools. [Statutory Authority: RCW 18.32.035. 92-01-122 (Order 228B), § 246-818-090, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-090, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.040. 84-23-062 (Order PL 496), § 308-40-110, filed 11/21/84; 83-08-021 (Order PL 431), § 308-40-110, filed 3/29/83; 82-04-024 (Order PL 391), § 308-40-110, filed 1/26/82; Order PL 253, § 308-40-110, filed 7/13/76; Order PL 194, § 308-40-110, filed 7/2/75.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-100 Licenses—Persons licensed or qualified out-of-state who are faculty at school of dentistry—Conditions. [Statutory Authority: RCW 18.32.035. 91-01-007 (Order 101B), recodified as § 246-818-100, filed 12/6/90, effective 1/31/91. Statutory Authority: RCW 18.32.035 and 18.32.195. 90-11-083 (Order 057), § 308-40-115, filed 5/17/90, effective 6/17/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-110 AIDS prevention and information education requirements. [Statutory Authority: RCW 18.32.035. 91-01-007 (Order 101B), recodified as § 246-818-110, filed 12/6/90, effective 1/31/91. Statutory Authority: 1988 c 206 § 604. 89-11-053 (Order PM 837), § 308-40-140, filed 5/17/89.] Repealed by 92-01-122 (Order 228B), filed 12/19/91, effective 1/19/92. Statutory Authority: RCW 18.32.035.
- 246-818-120 Licensure without examination for dentists—Eligibility. [Statutory Authority: RCW 18.32.035. 93-07-108 (Order 350B), § 246-818-120, filed 3/23/93, effective 4/23/93; 92-01-122 (Order 228B), § 246-818-120, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-120, filed 12/6/90, effective 1/31/91; 90-18-038 (Order 085), § 308-40-150, filed 8/28/90, effective 9/28/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-130 Licensure without examination for dentists—Application procedure. [Statutory Authority: RCW 18.32.035. 93-12-005 (Order 363B), § 246-818-130, filed 5/19/93, effective 6/19/93; 92-01-122 (Order 228B), § 246-818-

- 130, filed 12/19/91, effective 1/19/92; 91-01-007 (Order 101B), recodified as § 246-818-130, filed 12/6/90, effective 1/31/91; 90-18-038 (Order 085), § 308-40-151, filed 8/28/90, effective 9/28/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-140 Licensure without examination for dentists—Licensing examination standards. [Statutory Authority: RCW 18.32.035. 93-07-108 (Order 350B), § 246-818-140, filed 3/23/93, effective 4/23/93; 91-01-007 (Order 101B), recodified as § 246-818-140, filed 12/6/90, effective 1/31/91; 90-18-038 (Order 085), § 308-40-152, filed 8/28/90, effective 9/28/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-142 Temporary practice permits—Eligibility. [Statutory Authority: RCW 18.32.0365 and 18.130.075. 94-22-072, § 246-818-142, filed 11/2/94, effective 12/3/94.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-143 Temporary practice permits—Issuance and duration. [Statutory Authority: RCW 18.32.0365 and 18.130.075. 94-22-072, § 246-818-143, filed 11/2/94, effective 12/3/94.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-150 Renewal of licenses. [Statutory Authority: RCW 18.32.035. 91-01-007 (Order 101B), recodified as § 246-818-150, filed 12/6/90, effective 1/31/91. Statutory Authority: 1989 c 202 § 22. 90-05-039 (Order 036), § 308-40-135, filed 2/14/90, effective 3/1/90.] Repealed by 96-01-083, filed 12/18/95, effective 1/18/96. Statutory Authority: RCW 18.32.035.
- 246-818-990 Dentist fees. [Statutory Authority: RCW 43.70.040. 92-17-059 (Order 298), § 246-818-990, filed 8/18/92, effective 9/18/92; 91-02-049 (Order 121), recodified as § 246-818-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.250. 90-04-094 (Order 029), § 308-40-125, filed 2/7/90, effective 3/10/90. Statutory Authority: RCW 43.24.086. 87-18-031 (Order PM 667), § 308-40-125, filed 8/27/87. Statutory Authority: 1983 c 168 § 12. 83-17-031 (Order PL 442), § 308-40-125, filed 8/10/83. Formerly WAC 308-40-120.] Repealed by 94-02-058, filed 1/3/94, effective 3/1/94. Statutory Authority: RCW 43.70.040.
- 246-818-991 Dentist fees. [Statutory Authority: RCW 43.70.040. 94-02-058, § 246-818-991, filed 1/3/94, effective 3/1/94.] Repealed by 95-16-122 and 96-01-083, filed 8/2/95 and 12/18/95, effective 9/1/95 and 1/18/96. Statutory Authority: RCW 43.70.040 and 18.32.035.
- 246-838-030 Standards of conduct for discipline. [Statutory Authority: RCW 18.78.050. 92-17-023 (Order 296B), § 246-838-030, filed 8/10/92, effective 9/10/92. Statutory Authority: RCW 18.78.050 and 18.130.050. 92-02-046 (Order 231B), § 246-838-030, filed 12/27/91, effective 1/27/92. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-030, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.130.050 (1) and (12) and 1986 c 259 § § 19, 128 and 131. 86-18-031 (Order PM 612), § 308-117-025, filed 8/27/86. Statutory Authority: RCW 18.78.050. 86-01-084 (Order PL 574), § 308-117-025, filed 12/18/85.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-040 Licensure qualifications. [Statutory Authority: RCW 18.130.050 and 18.78.050. 94-08-050 § 246-838-040, filed 4/1/94, effective 5/2/94; 91-13-023 (Order 175B), § 246-838-040, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-040, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.78.072, 18.78.090, 18.78.225, 18.130.050 and 70.24.270. 88-24-017 (Order PM 768), § 308-117-030, filed 12/1/88. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-030, filed 8/25/88. Statutory Authority: 18.78.050, 18.78.060 and 18.130.050. 88-08-034 (Order PM 718), § 308-117-030, filed 4/1/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-030, filed 12/19/83. Formerly WAC 308-116-295.] Repealed by 99-08-104, filed 4/6/99, effective 5/7/99. Statutory Authority: Chapter 18.79 RCW.
- 246-838-050 Licensing examination. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-050, filed 10/7/93, effective 11/7/93; 92-17-023 (Order 296B), § 246-838-050, filed 8/10/92, effective 9/10/92; 91-01-078 (Order 109B), recodified as § 246-838-050, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-040, filed 8/25/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-040, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-060 Release of results of examination. [Statutory Authority: RCW 18.78.050 and 18.130.050. 91-13-023 (Order 175B), § 246-838-060, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-060, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-050, filed 8/25/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-050, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-070 Filing of application for licensing examination. [Statutory Authority: RCW 18.130.050 and 18.78.050. 94-08-050 § 246-838-070, filed 4/1/94, effective 5/2/94; 91-13-023 (Order 175B), § 246-838-070, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-070, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.78.072, 18.78.090, 18.78.225, 18.130.050 and 70.24.270. 88-24-017 (Order PM 768), § 308-117-060, filed 12/1/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-060, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-080 Failures—Repeat examination. [Statutory Authority: RCW 18.130.050 and 18.78.050. 94-08-050 § 246-838-080, filed 4/1/94, effective 5/2/94. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-080, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-070, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.

Reviser's note: Later promulgation, see chapter 246-817 WAC.

Chapter 246-838 PRACTICAL NURSES

- 246-838-010 Definitions. [Statutory Authority: RCW 18.78.050. 92-17-023 (Order 296B), § 246-838-010, filed 8/10/92, effective 9/10/92. Statutory Authority: RCW 18.78.050 and 18.130.050. 92-02-046 (Order 231B), § 246-838-010, filed 12/27/91, effective 1/27/92. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-010, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.78.072, 18.78.090, 18.78.225, 18.130.050 and 70.24.270. 88-24-017 (Order PM 768), § 308-117-010, filed 12/1/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-010, filed 12/19/83. Formerly WAC 308-116-005.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-020 Functions of a licensed practical nurse. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-020, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-020, filed 12/19/83. Formerly WAC 308-116-010.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-026 Mandatory reporting. [Statutory Authority: RCW 18.78.054 and 18.130.070. 91-13-023 (Order 175B), § 246-838-026, filed 6/11/91, effective 7/12/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.

- 246-838-090 Licensure of graduates of foreign schools of nursing. [Statutory Authority: RCW 18.130.050 and 18.78.050. 94-08-050 § 246-838-090, filed 4/1/94, effective 5/2/94. Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-090, filed 10/7/93, effective 11/7/93. Statutory Authority: RCW 18.78.050 and 18.130.050. 91-13-023 (Order 175B), § 246-838-090, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-090, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.060, 18.78.070 and 18.130.050. 89-10-075 (Order PM 835), § 308-117-080, filed 5/3/89; 88-05-011 (Order PM 705), § 308-117-080, filed 2/9/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-080, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-100 Licensure by interstate endorsement. [Statutory Authority: RCW 18.78.050 and 18.130.050. 91-13-023 (Order 175B), § 246-838-100, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-100, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.78.072, 18.78.090, 18.78.225, 18.130.050 and 70.24.270. 88-24-017 (Order PM 768), § 308-117-090, filed 12/1/88. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-090, filed 8/25/88. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-090, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-110 Documents which indicate authorization to practice. [Statutory Authority: RCW 18.130.050 and 18.78.050. 94-08-050 § 246-838-110, filed 4/1/94, effective 5/2/94. Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-110, filed 10/7/93, effective 11/7/93. Statutory Authority: RCW 18.78.050 and 18.130.050. 92-02-046 (Order 231B), § 246-838-110, filed 12/27/91, effective 1/27/92. Statutory Authority: RCW 18.78.050. 91-13-023 (Order 175B), § 246-838-110, filed 6/11/91, effective 7/12/91; 91-01-078 (Order 109B), recodified as § 246-838-110, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-095, filed 8/25/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-120 Renewal of licenses. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-120, filed 10/7/93, effective 11/7/93. Statutory Authority: RCW 18.130.175 and 18.78.050. 93-04-080 (Order 331B), § 246-838-120, filed 2/1/93, effective 3/4/93. Statutory Authority: RCW 18.78.050 and 18.130.050. 91-13-023 (Order 175B), § 246-838-120, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-120, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.78.072, 18.78.090, 18.78.225, 18.130.050 and 70.24.270. 88-24-017 (Order PM 768), § 308-117-100, filed 12/1/88. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-100, filed 8/25/88. Statutory Authority: RCW 18.78.050, 18.130.050 (1) and (12) and 1986 c 259 §§ 19, 128 and 131. 86-18-031 (Order PM 612), § 308-117-100, filed 8/27/86. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-100, filed 12/19/83. Formerly WAC 308-116-280.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-121 Responsibility for maintaining mailing address. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-121, filed 10/7/93, effective 11/7/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-838-130 Return to active status from inactive or lapsed status. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-130, filed 10/7/93, effective 11/7/93; 91-13-023 (Order 175B), § 246-838-130, filed 6/11/91, effective 7/12/91; 91-01-078 (Order 109B), recodified as § 246-838-130, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-100, filed 8/25/88. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-130, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050 and 18.130.050. 87-17-021 (Order PM 672), § 308-117-130, filed 8/12/87. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-120, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-140 Establishment of new practical nursing program. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-140, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-110, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-150 Survey visits. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-150, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-120, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-160 Board action following survey visits. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-160, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050 and 18.130.050. 87-17-021 (Order PM 672), § 308-117-130, filed 8/12/87. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-130, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-170 Termination of a suspension. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-170, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-140, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-180 Student records. [Statutory Authority: RCW 18.130.050 and 18.78.050. 94-08-050 § 246-838-180, filed 4/1/94, effective 5/2/94. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-180, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-150, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-190 Statement of completion of the course. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-190, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-160, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-200 Readmissions, transfers. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-200, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-170, filed 12/19/83. Formerly WAC 308-116-098.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-210 Clinical practice areas. [Statutory Authority: RCW 18.78.050. 91-13-023 (Order 175B), § 246-838-210, filed 6/11/91, effective 7/12/91; 91-01-078 (Order 109B), recodified as § 246-838-210, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-180, filed 12/19/83. Formerly WAC 308-116-052.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-220 Structure for curriculum implementation. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-220, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-190, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-838-230 Curriculum standards in an approved practical nursing program. [Statutory Authority: RCW 18.78.050 and 18.130.050. 92-02-046 (Order 231B), § 246-838-230, filed 12/27/91, effective 1/27/92. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-230, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050 and 18.130.050. 87-17-021 (Order PM 672), § 308-117-200, filed 8/12/87. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-200, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.

246-838-240	Curriculum content. [Statutory Authority: RCW 18.78.050. 92-17-023 (Order 296B), § 246-838-240, filed 8/10/92, effective 9/10/92; 91-01-078 (Order 109B), recodified as § 246-838-240, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050 and 18.130.050. 87-17-021 (Order PM 672), § 308-117-300, filed 8/12/87. Statutory Authority: RCW 18.78.050. 84-01-061 (Order PL 452), § 308-117-300, filed 12/19/83.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.	246-838-330	Impaired practical nurse program—Content—License surcharge. [Statutory Authority: RCW 18.130.175 and 18.78.050. 93-04-080 (Order 331B), § 246-838-330, filed 2/1/93, effective 3/4/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-838-250	AIDS education and training. [Statutory Authority: RCW 70.24.270. 91-13-023 (Order 175B), § 246-838-250, filed 6/11/91, effective 7/12/91. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-250, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.78.072, 18.78.090, 18.78.225, 18.130.050 and 70.24.270. 88-24-017 (Order PM 768), § 308-117-360, filed 12/1/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-838-340	Executive secretary qualifications. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-340, filed 10/7/93, effective 11/7/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-838-260	Standards/competencies. [Statutory Authority: [RCW 18.78.050]. 91-13-023 (Order 175B), § 246-838-260, filed 6/11/91, effective 7/12/91; 91-01-078 (Order 109B), recodified as § 246-838-260, filed 12/17/90, effective 1/31/91; 84-01-061 (Order PL 452), § 308-117-400, filed 12/19/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-838-350	Appearance and practice before agency—Standards of ethical conduct. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-350, filed 10/7/93, effective 11/7/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-838-270	Criteria for approved refresher course. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-270, filed 10/7/93, effective 11/7/93; 91-13-023 (Order 175B), § 246-838-270, filed 6/11/91, effective 7/12/91; 91-01-078 (Order 109B), recodified as § 246-838-270, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-410, filed 8/25/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-838-360	Adjudicative proceedings procedural rules. [Statutory Authority: RCW 18.78.050. 93-21-006, § 246-838-360, filed 10/7/93, effective 11/7/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-838-280	Scope of practice—Advisory opinions. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-280, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, 18.78.054, 18.78.060, 18.130.050 and SHB 1404, 1988 c 211. 88-18-005 (Order PM 768), § 308-117-420, filed 8/25/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-838-990	Practical nurse fees. [Statutory Authority: RCW 43.70.250. 94-08-102, § 246-838-990, filed 4/6/94, effective 5/7/94; 93-07-023 (Order 344), § 246-838-990, filed 3/9/93, effective 4/9/93; 91-13-002 (Order 173), § 246-838-990, filed 6/6/91, effective 7/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-838-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.250. 90-04-094 (Order 029), § 308-117-500, filed 2/7/90, effective 3/10/90. Statutory Authority: RCW 43.24.086. 88-20-075 (Order 783), § 308-117-500, filed 10/5/88; 87-10-028 (Order PM 650), § 308-117-500, filed 5/1/87.] Repealed by 95-12-021, filed 5/31/95, effective 7/1/95. Statutory Authority: RCW 18.79.200.
246-838-290	Terms used in WAC 246-838-290 through 246-838-310. [Statutory Authority: RCW 18.78.050 and 18.130.050. 92-02-046 (Order 231B), § 246-838-290, filed 12/27/91, effective 1/27/92. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-290, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, [18.78.]054, 18.130.050 and [18.130.]175. 89-07-005 (Order PM 823), § 308-117-460, filed 3/3/89.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	Chapter 246-839 REGISTERED NURSES	
246-838-300	Approval of substance abuse monitoring programs. [Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-300, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, [18.78.]054, 18.130.050 and [18.130.]175. 89-07-005 (Order PM 823), § 308-117-470, filed 3/3/89.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-010	Definitions. [Statutory Authority: RCW 18.88.080. 92-02-023 (Order 230B), § 246-839-010, filed 12/23/91, effective 1/23/92; 91-07-067 (Order 152B), § 246-839-010, filed 3/20/91, effective 4/20/91; 91-07-049 (Order 116B), recodified as § 246-839-010, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270. 88-23-035 (Order PM 795), § 308-120-100, filed 11/9/88. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-100, filed 7/28/88. Statutory Authority: RCW 18.88.080. 81-04-007 (Order PL 370), § 308-120-100, filed 1/27/81; 80-04-072 (Order PL 339), § 308-120-100, filed 3/27/80; Order PL-124, § 308-120-100, filed 5/26/72.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-838-310	Participation in approved monitoring program. [Statutory Authority: RCW 18.78.050 and 18.130.050. 92-02-046 (Order 231B), § 246-838-310, filed 12/27/91, effective 1/27/92. Statutory Authority: RCW 18.78.050. 91-01-078 (Order 109B), recodified as § 246-838-310, filed 12/17/90, effective 1/31/91. Statutory Authority: RCW 18.78.050, [18.78.]054, 18.130.050 and [18.130.]175. 89-07-005 (Order PM 823), § 308-117-480, filed 3/3/89.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-020	Documents which indicate authorization to practice registered nursing in Washington. [Statutory Authority: RCW 18.88.080. 94-20-081, § 246-839-020, filed 10/4/94 effective 11/4/94. Statutory Authority: RCW 18.88.140. 94-07-012, § 246-839-020, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-020, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-020, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, [18.88.]086, [18.88.]110, [18.88.]130, [18.88.]140, [18.88.]175, [18.88.]280 and 18.130.050. 89-12-033 (Order PM 847), § 308-120-170, filed 6/1/89. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-170, filed 7/28/88. Statutory Authority: RCW 18.88.080. 85-24-027 (Order PL 569), § 308-120-170, filed 11/26/85; 81-10-026 (Order PL 377), § 308-120-170, filed 4/28/81; Order PL 196, § 308-120-170, filed 7/25/75; Order PL-124, § 308-120-170, filed 5/26/72.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-838-320	Executive secretary qualifications. [Statutory Authority: RCW 18.78.050. 92-17-023 (Order 296B), § 246-838-320, filed 8/10/92, effective 9/10/92.] Repealed by 93-21-006, filed 10/7/93, effective 11/7/93. Statutory Authority: RCW 18.78.050.	246-839-030	Qualification/eligibility to take the licensing examination. [Statutory Authority: RCW 18.88.140. 94-07-012, § 246-839-030, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), §

- 246-839-030, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-030, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270. 88-23-035 (Order PM 795), § 308-120-161, filed 11/9/88. Statutory Authority: RCW 18.88.080, 82-01-012 (Order PL 387), § 308-120-161, filed 12/7/81; 81-04-007 (Order PL 370), § 308-120-161, filed 1/27/81.] Repealed by 97-17-015, filed 8/8/97, effective 9/8/97. Statutory Authority: RCW 18.79.160.
- 246-839-040 Filing of application for licensing examination. [Statutory Authority: RCW 18.88.140, 94-07-012, § 246-839-040, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-040, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-162, filed 11/18/87. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140, 82-22-091 (Order PL 410), § 308-120-162, filed 11/3/82. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-162, filed 1/27/81.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-050 Licensing examination. [Statutory Authority: RCW 18.88.140, 94-07-012, § 246-839-050, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-050, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211, 88-16-034 (Order PM 751), § 308-120-163, filed 7/28/88. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140, 82-22-091 (Order PL 410), § 308-120-163, filed 11/3/82. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-163, filed 1/27/81.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-060 Release of results of examination. [Statutory Authority: RCW 18.88.140, 94-07-012, § 246-839-060, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-060, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-060, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.130.050 and 1988 c 211, 88-16-034 (Order PM 751), § 308-120-164, filed 7/28/88. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140, 82-22-091 (Order PL 410), § 308-120-164, filed 11/3/82. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-164, filed 1/27/81.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-070 Failures—Repeat examination. [Statutory Authority: RCW 18.88.140, 94-07-012, § 246-839-070, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-070, filed 3/18/91, effective 4/18/91; 90-04-059, § 308-120-165, filed 2/2/90, effective 3/5/90. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-165, filed 11/18/87. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140, 82-22-091 (Order PL 410), § 308-120-165, filed 11/3/82. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-165, filed 1/27/81.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-080 Applicants previously licensed in a foreign country. [Statutory Authority: RCW 18.88.140, 94-07-012, § 246-839-080, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-080, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-080, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-166, filed 11/9/88. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140, 82-22-091 (Order PL 410), § 308-120-166, filed 11/3/82. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-166, filed 1/27/81.]
- Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-090 Licensure by interstate endorsement. [Statutory Authority: RCW 18.88.140, 94-07-012, § 246-839-090, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-090, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-090, filed 3/18/91, effective 4/18/91; 91-07-032 (Order 151B), § 308-120-168, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 18.88.080, [18.88].086, [18.88].130, [18.88].140, [18.88].150, 18.130.050 and 70.24.270, 89-12-032 (Order PM 846), § 308-120-168, filed 6/1/89. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-168, filed 11/9/88. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-168, filed 1/27/81.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-100 AIDS education and training. [Statutory Authority: RCW 18.88.080 and 70.24.270, 91-23-077 (Order 214B), § 246-839-100, filed 11/19/91, effective 12/20/91. Statutory Authority: RCW 70.24.270, 91-07-049 (Order 116B), recodified as § 246-839-100, filed 3/18/91, effective 4/18/91; 91-07-032 (Order 151B), § 308-120-610, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-610, filed 11/9/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-105 Brief adjudicative proceedings—Denials based on failure to meet education, experience, or examination prerequisites for licensure. [Statutory Authority: RCW 18.88.080, 91-19-102 (Order 198B), § 246-839-105, filed 9/18/91, effective 10/19/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-110 Renewal of licenses. [Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-110, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-110, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-180, filed 11/9/88. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211, 88-16-034 (Order PM 751), § 308-120-180, filed 7/28/88. Statutory Authority: RCW 18.88.080, 83-24-048 (Order PL 449), § 308-120-180, filed 12/2/83; Order PL 216, § 308-120-180, filed 11/5/75; Order PL-134, § 308-120-180, filed 10/13/72.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-115 Responsibility for maintaining mailing address on file with the board. [Statutory Authority: RCW 18.88.080 and 18.88.086, 93-11-007 (Order 361B), § 246-839-115, filed 5/5/93, effective 6/5/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-120 Return to active status from inactive or lapsed status. [Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-120, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-120, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211, 88-16-034 (Order PM 751), § 308-120-185, filed 7/28/88. Statutory Authority: RCW 18.88.080, 81-04-007 (Order PL 370), § 308-120-185, filed 1/27/81; 78-05-085 (Order PL 288, Resolution 78-143), § 308-120-185, filed 5/2/78; Order PL 258, § 308-120-185, filed 12/7/76. Formerly WAC 308-120-18001.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-130 Criteria for approved refresher course. [Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-130, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086 and 18.130.050, 88-05-010 (Order PM 704), § 308-120-186, filed 2/9/88. Statutory Authority: RCW

- 18.88.080. 79-06-025 (Order PL-305), § 308-120-186, filed 5/15/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-300 Advanced registered nurse practitioner. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-300, filed 12/21/94, effective 1/21/95. Statutory Authority: RCW 18.88.030(2) and 18.88.080.92-20-047 (Order 306B), § 246-839-300, filed 9/30/92, effective 10/31/92. Statutory Authority: RCW 18.88.080.91-07-049 (Order 116B), recodified as § 246-839-300, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-300, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-300, filed 11/3/82; Order PL 270, § 308-120-300, filed 6/16/77.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-305 Criteria for formal advanced nursing education meeting the requirement for ARNP licensure. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-305, filed 12/21/94, effective 1/21/95.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-310 Use of nomenclature. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-310, filed 12/21/94, effective 1/21/95. Statutory Authority: RCW 18.88.030(2) and 18.88.080.92-20-047 (Order 306B), § 246-839-310, filed 9/30/92, effective 10/31/92. Statutory Authority: RCW 18.88.080.91-23-077 (Order 214B), § 246-839-310, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-310, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, [18.88].086, [18.88].110, [18.88].130, [18.88].140, [18.88].175, [18.88].280 and 18.130.050.89-12-033 (Order PM 847), § 308-120-305, filed 6/1/89. Statutory Authority: RCW 18.88.080.85-24-027 (Order PL 569), § 308-120-305, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-305, filed 11/3/82; Order PL 270, § 308-120-305, filed 6/16/77.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-315 Clinical specialist in psychiatric/mental health nursing. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-315, filed 12/21/94, effective 1/21/95.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-320 Certification and certification program. [Statutory Authority: RCW 18.88.030(2) and 18.88.080.92-20-047 (Order 306B), § 246-839-320, filed 9/30/92, effective 10/31/92. Statutory Authority: RCW 18.88.080.91-23-077 (Order 214B), § 246-839-320, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-320, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-315, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-315, filed 11/3/82.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-330 Board approval of certification programs. [Statutory Authority: RCW 18.88.030(2) and 18.88.080.92-20-047 (Order 306B), § 246-839-330, filed 9/30/92, effective 10/31/92. Statutory Authority: RCW 18.88.080.91-23-077 (Order 214B), § 246-839-330, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-330, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-325, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-325, filed 11/3/82.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-340 Application requirements for ARNP. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-340, filed 12/21/94, effective 1/21/95. Statutory Authority: RCW 18.88.080.91-23-077 (Order 214B), § 246-839-340, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-340, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.030(2), 18.88.080, 18.88.086, 18.88.140 and 18.130.050.88-07-049 (Order PM 717), § 308-120-335, filed 3/14/88. Statutory Authority: RCW 18.88.080.85-24-027 (Order PL 569), § 308-120-335, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-335, filed 11/3/82.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-345 ARNP designation in more than one area of specialty. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-345, filed 12/21/94, effective 1/21/95.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-350 Application requirements for ARNP interim permit. [Statutory Authority: RCW 18.88.080.93-22-052, § 246-839-350, filed 10/28/93, effective 11/28/93; 91-23-077 (Order 214B), § 246-839-350, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-350, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211.88-16-034 (Order PM 751), § 308-120-338, filed 7/28/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-360 Renewal of ARNP designation. [Statutory Authority: RCW 18.88.080.93-22-052, § 246-839-360, filed 10/28/93, effective 11/28/93; 91-23-077 (Order 214B), § 246-839-360, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-360, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-345, filed 11/26/85. Statutory Authority: RCW 18.88.030 and 18.88.080.83-04-051 (Order PL 424), § 308-120-345, filed 2/1/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-365 Return to active ARNP status from inactive or lapsed status. [Statutory Authority: RCW 18.79.110.95-01-107, § 246-839-365, filed 12/21/94, effective 1/21/95.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-370 Termination of ARNP designation by the board. [Statutory Authority: RCW 18.88.080 and 18.130.050.91-23-077 (Order 214B), § 246-839-370, filed 11/19/91, effective 12/20/91. Statutory Authority: RCW 18.88.080.91-07-049 (Order 116B), recodified as § 246-839-370, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086 and 18.130.050.88-18-082 (Order PM 760), § 308-120-360, filed 9/6/88. Statutory Authority: RCW 18.88.080.85-24-027 (Order PL 569), § 308-120-360, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-360, filed 11/3/82.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-400 ARNP with prescriptive authorization. [Statutory Authority: RCW 18.88.080.93-22-052, § 246-839-400, filed 10/28/93, effective 11/28/93; 91-07-049 (Order 116B), recodified as § 246-839-400, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-400, filed 11/26/85; 83-16-065 (Order PL 441), § 308-120-400, filed 8/2/83. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-400, filed 11/3/82. Statutory Authority: RCW 18.88.080.79-09-038 (Order PL-310), § 308-120-400, filed 8/17/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-410 Application requirements for ARNP with prescriptive authority. [Statutory Authority: RCW 18.88.080.93-22-052, § 246-839-410, filed 10/28/93, effective 11/28/93; 91-23-077 (Order 214B), § 246-839-410, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-410, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-410, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140.82-22-091 (Order PL 410), § 308-120-410, filed 11/3/82. Statutory Authority: RCW 18.88.080.81-04-007 (Order PL 370), § 308-120-410, filed 1/27/81; 79-09-038 (Order PL-310), § 308-120-410, filed 8/17/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-420 Authorized prescriptions by the ARNP with prescriptive authority. [Statutory Authority: RCW 18.88.080.93-22-052, § 246-839-420, filed 10/28/93, effective

- 11/28/93; 91-07-049 (Order 116B), recodified as § 246-839-420, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-420, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140. 82-22-091 (Order PL 410), § 308-120-420, filed 11/3/82. Statutory Authority: RCW 18.88.080. 81-04-007 (Order PL 370), § 308-120-420, filed 1/27/81; 79-09-038 (Order PL-310), § 308-120-420, filed 8/17/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-430 Termination of ARNP prescriptive authorization. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-430, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-430, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-430, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140. 82-22-091 (Order PL 410), § 308-120-430, filed 11/3/82. Statutory Authority: RCW 18.88.080. 79-09-038 (Order PL-310), § 308-120-430, filed 8/17/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-440 Prescriptive authorization period. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-440, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-440, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-440, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140. 82-22-091 (Order PL 410), § 308-120-440, filed 11/3/82. Statutory Authority: RCW 18.88.080. 79-09-038 (Order PL-310), § 308-120-440, filed 8/17/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-450 Renewal. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-450, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-450, filed 3/18/91, effective 4/18/91; 85-24-027 (Order PL 569), § 308-120-450, filed 11/26/85. Statutory Authority: RCW 18.88.030(2), 18.88.080 and 18.88.140. 82-22-091 (Order PL 410), § 308-120-450, filed 11/3/82. Statutory Authority: RCW 18.88.080. 79-09-038 (Order PL-310), § 308-120-450, filed 8/17/79.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-505 Philosophy governing approval of nursing education programs. [Statutory Authority: RCW 18.88.080. 91-07-049 (Order 116B), recodified as § 246-839-505, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-505, filed 7/28/88. Statutory Authority: RCW 18.88.080. 80-04-072 (Order PL 339), § 308-120-505, filed 3/27/80.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-506 Purposes of board approval of nursing education programs. [Statutory Authority: RCW 18.88.080. 91-07-049 (Order 116B), recodified as § 246-839-506, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-506, filed 7/28/88. Statutory Authority: RCW 18.88.080. 80-04-072 (Order PL 339), § 308-120-506, filed 3/27/80.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-525 Approval of nursing education programs. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-525, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-525, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-525, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-530 Denial, conditional approval or withdrawal of approval. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-530, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-530, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-530, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-535 Reinstatement of approval. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-535, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-535, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-535, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-540 Appeal of board decisions. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-540, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-540, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-540, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-545 Closing of an approved nursing education program. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-545, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-545, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-545, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-550 Purpose, philosophy, and objectives for approved nursing education programs. [Statutory Authority: RCW 18.88.080. 91-07-049 (Order 116B), recodified as § 246-839-550, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-550, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-555 Organization and administration for approved nursing education programs. [Statutory Authority: RCW 18.88.080. 91-07-049 (Order 116B), recodified as § 246-839-555, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-555, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-560 Resources, facilities, and services for approved nursing education programs. [Statutory Authority: RCW 18.88.080. 91-07-049 (Order 116B), recodified as § 246-839-560, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-560, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.
- 246-839-565 Students in approved nursing education programs. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-565, filed 11/19/91, effective 12/20/91; 91-07-067 (Order 152B), § 246-839-565, filed 3/20/91, effective 4/20/91; 91-07-049 (Order 116B), recodified as § 246-839-565, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211. 88-16-034 (Order PM 751), § 308-120-565, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.

246-839-570	Faculty in approved nursing education programs. [Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-570, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211, 88-16-034 (Order PM 751), § 308-120-570, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.	246-839-760	Terms used in WAC 246-839-750 through 246-839-780. [Statutory Authority: RCW 18.88.080 and 18.130.050, 91-23-077 (Order 214B), § 246-839-760, filed 11/19/91, effective 12/20/91. Statutory Authority: RCW 18.130.050, 91-07-049 (Order 116B), recodified as § 246-839-760, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-760, filed 11/9/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-575	Curriculum for approved nursing education programs. [Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-575, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.88.110, 18.88.120, 18.88.140, 18.88.160, 18.88.190, 18.88.200, 18.88.220, 18.130.050 and 1988 c 211, 88-16-034 (Order PM 751), § 308-120-575, filed 7/28/88.] Repealed by 95-21-072, filed 10/16/95, effective 11/16/95. Statutory Authority: RCW 18.79.110.	246-839-770	Approval of substance abuse monitoring programs. [Statutory Authority: RCW 18.130.050, 91-07-049 (Order 116B), recodified as § 246-839-770, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-770, filed 11/9/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-700	Standards of nursing conduct or practice. [Statutory Authority: RCW 18.88.080 and 18.130.050, 91-23-077 (Order 214B), § 246-839-700, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-700, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-700, filed 11/18/87.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-780	Participation in approved substance abuse monitoring program. [Statutory Authority: RCW 18.130.050, 91-07-049 (Order 116B), recodified as § 246-839-780, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-780, filed 11/9/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-710	Violations of standards of nursing conduct or practice. [Statutory Authority: RCW 18.88.080 and 18.130.050, 91-23-077 (Order 214B), § 246-839-710, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-710, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-710, filed 11/18/87.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-800	Scope of practice—Advisory opinions. [Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-800, filed 3/18/91, effective 4/18/91; 85-17-031 (Order PL 548), § 308-120-800, filed 8/14/85.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-720	Mitigating circumstances. [Statutory Authority: RCW 18.88.080 and 18.130.050, 91-07-049 (Order 116B), recodified as § 246-839-720, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-720, filed 11/18/87.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-810	Provision for continuity of drug therapy for residents. [Statutory Authority: RCW 18.88.080, 91-07-049 (Order 116B), recodified as § 246-839-810, filed 3/18/91, effective 4/18/91; 83-12-026 (Order PL 436), § 308-120-270, filed 5/25/83.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-730	Mandatory reporting defined. [Statutory Authority: RCW 18.88.080, 18.130.050 and 18.130.070, 91-23-077 (Order 214B), § 246-839-730, filed 11/19/91, effective 12/20/91. Statutory Authority: RCW 18.88.080 and 18.130.050, 91-07-049 (Order 116B), recodified as § 246-839-730, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-730, filed 11/18/87.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-830	Provision for clean, intermittent catheterization in schools. [Statutory Authority: RCW 18.88.080, 92-01-023 (Order 222B), § 246-839-820, filed 12/6/91, effective 1/6/92; 91-07-049 (Order 116B), recodified as § 246-839-820, filed 3/18/91, effective 4/18/91; 90-04-059, § 308-120-620, filed 2/2/90, effective 3/5/90.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-740	Violations considered for disciplinary purposes only. [Statutory Authority: RCW 18.88.080 and 18.130.050, 91-23-077 (Order 214B), § 246-839-740, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-740, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.086, 18.130.050, 18.130.070 and 18.130.180, 87-23-050 (Order PM 691), § 308-120-740, filed 11/18/87.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-840	Determination and pronouncement of death. [Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-830, filed 11/19/91, effective 12/20/91; 91-07-049 (Order 116B), recodified as § 246-839-830, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, [18.88].086, [18.88].110, [18.88].130, [18.88].140, [18.88].175, [18.88].280 and 18.130.050, 89-12-033 (Order PM 847), § 308-120-810, filed 6/1/89.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-745	Adjudicative proceedings. [Statutory Authority: RCW 18.130.050, 93-20-113, § 246-839-745, filed 10/6/93, effective 11/6/93.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-850	Nursing technician. [Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-840, filed 11/19/91, effective 12/20/91; 91-07-067 (Order 152B), § 246-839-840, filed 3/20/91, effective 4/20/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
246-839-750	Philosophy governing voluntary substance abuse monitoring programs. [Statutory Authority: RCW 18.130.050, 91-07-049 (Order 116B), recodified as § 246-839-750, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 18.88.080, 18.88.140, 18.130.175 and 70.24.270, 88-23-035 (Order PM 795), § 308-120-750, filed 11/9/88.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.	246-839-860	Use of nomenclature. [Statutory Authority: RCW 18.88.080, 91-23-077 (Order 214B), § 246-839-850, filed 11/19/91, effective 12/20/91; 91-07-067 (Order 152B), § 246-839-850, filed 3/20/91, effective 4/20/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
		246-839-870	Nursing technician criteria. [Statutory Authority: RCW 18.88.080, 91-07-067 (Order 152B), § 246-839-860, filed 3/20/91, effective 4/20/91.] Repealed by 97-17-049, filed 8/15/97, effective 9/15/97. Statutory Authority: RCW 18.79.160.
		246-839-880	Functions of the nursing technician. [Statutory Authority: RCW 18.88.080, 91-07-067 (Order 152B), § 246-839-870, filed 3/20/91, effective 4/20/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
			Functions of the registered nurse supervising the nursing technician. [Statutory Authority: RCW 18.88.080, 91-07-067 (Order 152B), § 246-839-880, filed 3/20/91,

- effective 4/20/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-890 Responsibilities of the employing facility. [Statutory Authority: RCW 18.88.080. 91-23-077 (Order 214B), § 246-839-890, filed 11/19/91, effective 12/20/91; 91-07-067 (Order 152B), § 246-839-890, filed 3/20/91, effective 4/20/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-900 Responsibilities of the nurse administrator. [Statutory Authority: RCW 18.88.080. 91-07-067 (Order 152B), § 246-839-900, filed 3/20/91, effective 4/20/91.] Repealed by 97-13-100, filed 6/18/97, effective 7/19/97. Statutory Authority: Chapter 18.79 RCW.
- 246-839-990 Registered nurse fees. [Statutory Authority: RCW 18.88.080. 93-12-125 (Order 366), § 246-839-990, filed 6/2/93, effective 7/3/93. Statutory Authority: RCW 43.70.040. 91-07-048 (Order 132), recodified as § 246-839-990, filed 3/18/91, effective 4/18/91. Statutory Authority: RCW 43.70.250. 90-04-094 (Order 029), § 308-120-275, filed 2/7/90, effective 3/10/90. Statutory Authority: RCW 43.24.086. 88-20-075 (Order 783), § 308-120-275, filed 10/5/88; 87-10-028 (Order PM 650), § 308-120-275, filed 5/1/87. Statutory Authority: 1983 c 168 § 12. 83-17-031 (Order PL 442), § 308-120-275, filed 8/10/83. Formerly WAC 308-120-260.] Repealed by 95-12-021, filed 5/31/95, effective 7/1/95. Statutory Authority: RCW 18.79.200.
- Chapter 246-857**
PHARMACISTS—PRACTICE AND PROCEDURE
- 246-857-020 Practice and procedure—Adoption by reference. [Statutory Authority: RCW 18.64.005 and 34.05.220. 92-12-035 (Order 277B), § 246-857-020, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-020, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 18.64.005. 88-06-026 (Order 210), § 360-08-005, filed 2/25/88.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-030 Appearance and practice before board—Who may appear. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-030, filed 8/30/91, effective 9/30/91; Regulation .08.010, filed 1/10/63; Regulation .08.010, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-040 Appearance and practice before board—Standards of ethical conduct. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-040, filed 8/30/91, effective 9/30/91; Regulation .08.030, filed 1/10/63; Regulation .08.040, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-050 Appearance and practice before board—Appearance by former employee of board or former member of attorney general's staff. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-050, filed 8/30/91, effective 9/30/91; Regulation .08.040, filed 1/10/63; Regulation .08.050, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-060 Appearance and practice before board—Former employee as expert witness. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-060, filed 8/30/91, effective 9/30/91; Regulation .08.050, filed 1/10/63; Regulation .08.060, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-070 Depositions and interrogatories in contested cases—Right to take. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-070, filed 8/30/91, effective 9/30/91; Regulation .08.230, filed 1/10/63; Regulation .08.230, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-080 Depositions and interrogatories in contested cases—Scope. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-080, filed 8/30/91, effective 9/30/91; Regulation .08.240, filed 1/10/63; Regulation .08.240, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-090 Depositions and interrogatories in contested cases—Officer before whom taken. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-090, filed 8/30/91, effective 9/30/91; Regulation .08.250, filed 1/10/63; Regulation .08.250, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-100 Depositions and interrogatories in contested cases—Authorization. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-100, filed 8/30/91, effective 9/30/91; Regulation .08.260, filed 1/10/63; Regulation .08.260, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-110 Depositions and interrogatories in contested cases—Protection of parties and deponents. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-110, filed 8/30/91, effective 9/30/91; Regulation .08.270, filed 1/10/63; Regulation .08.270, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-120 Depositions and interrogatories in contested cases—Oral examination and cross-examination. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-120, filed 8/30/91, effective 9/30/91; Regulation .08.280, filed 1/10/63; Regulation .08.280, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-130 Depositions and interrogatories in contested cases—Recordation. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-130, filed 8/30/91, effective 9/30/91; Regulation .08.290, filed 1/10/63; Regulation .08.290, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-140 Depositions and interrogatories in contested cases—Signing attestation and return. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-140, filed 8/30/91, effective 9/30/91; Regulation .08.300, filed 1/10/63; Regulation .08.300, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-150 Depositions and interrogatories in contested cases—Use and effect. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-150, filed 8/30/91, effective 9/30/91; Regulation .08.310, filed 1/10/63; Regulation .08.310, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-160 Depositions and interrogatories in contested cases—Fees of officers and deponents. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-160, filed 8/30/91, effective 9/30/91; Regulation .08.320, filed 1/10/63; Regulation .08.320, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-170 Depositions upon interrogatories—Submission of interrogatories. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-170, filed 8/30/91, effective 9/30/91; Regulation .08.330, filed 1/10/63; Regulation .08.330, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-180 Depositions upon interrogatories—Interrogation. [Statutory Authority: RCW 18.64.005 and 34.05.220. 92-12-035 (Order 277B), § 246-857-180, filed 5/28/92, effective 6/28/92.]

- 246-857-190
 Depositions upon interrogatories—Attestation and return. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-180, filed 8/30/91, effective 9/30/91; Regulation .08.340, filed 1/10/63; Regulation .08.340, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-200
 Depositions upon interrogatories—Provisions of deposition rule. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-200, filed 8/30/91, effective 9/30/91; Regulation .08.360, filed 1/10/63; Regulation .08.360, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-210
 Official notice—Matters of law. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-210, filed 8/30/91, effective 9/30/91; Regulation .08.370, filed 1/10/63; Regulation .08.370, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-220
 Official notice—Material facts. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-220, filed 8/30/91, effective 9/30/91; Regulation .08.380, filed 1/10/63; Regulation .08.380, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-230
 Presumptions. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-230, filed 8/30/91, effective 9/30/91; Regulation .08.390, filed 1/10/63; Regulation .08.390, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-240
 Stipulations and admissions of record. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-240, filed 8/30/91, effective 9/30/91; Regulation .08.400, filed 1/10/63; Regulation .08.400, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-250
 Definition of issues before hearing. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-250, filed 8/30/91, effective 9/30/91; Regulation .08.420, filed 1/10/63; Regulation .08.420, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-260
 Rules of evidence—Admissibility criteria. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-260, filed 8/30/91, effective 9/30/91; Regulation .08.520, filed 1/10/63; Regulation .08.520, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-270
 Rules of evidence—Tentative admission—Exclusion—Discontinuance—Objections. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-270, filed 8/30/91, effective 9/30/91; Regulation .08.530, filed 1/10/63; Regulation .08.530, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-280
 Petitions for rule making, amendment or repeal—Who may petition. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-280, filed 8/30/91, effective 9/30/91; Regulation .08.540, filed 1/10/63; Regulation .08.540, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-290
 Petitions for rule making, amendment or repeal—Requirements. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-290, filed 8/30/91, effective 9/30/91; Regulation .08.550, filed 1/10/63; Regulation .08.550, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-300
 Petitions for rule making, amendment or repeal—Agency must consider. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-300, filed 8/30/91, effective 9/30/91; Regulation .08.560, filed 1/10/63; Regulation .08.560, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-310
 Petitions for rule making, amendment or repeal—Notice of disposition. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-310, filed 8/30/91, effective 9/30/91; Regulation .08.570, filed 1/10/63; Regulation .08.570, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-320
 Declaratory rulings. [Statutory Authority: RCW 18.64.005 and 34.05.220. 92-12-035 (Order 277B), § 246-857-320, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-320, filed 8/30/91, effective 9/30/91; Regulation .08.580, filed 1/10/63; Regulation .08.580, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-330
 Forms. [Statutory Authority: RCW 18.64.005 and 34.05.220. 92-12-035 (Order 277B), § 246-857-330, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-330, filed 8/30/91, effective 9/30/91; Regulation .08.590, filed 1/10/63; Regulation .08.590, filed 3/23/60.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.
- 246-857-340
 SEPA exemption. [Statutory Authority: Chapter 43.21C RCW. 92-12-035 (Order 277B), § 246-857-340, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-857-340, filed 8/30/91, effective 9/30/91; Order 128, § 360-45-010, filed 5/19/76.] Repealed by 93-04-017 (Order 330B), filed 1/25/93, effective 2/25/93. Statutory Authority: RCW 18.64.005.

Chapter 246-893

PHARMACY—PUBLIC RECORDS ACCESS PURSUANT TO INITIATIVE 276

- 246-893-001
 Purpose. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-001, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-010, filed 4/12/89; Order 113, § 360-44-010, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-010
 Definitions. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-010, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 18.64.005, 18.81.080 and 42.17.290. 83-01-083 (Order 171), § 360-44-020, filed 12/17/82; Order 113, § 360-44-020, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-020
 Description of central and field organization of the board. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-020, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-020, filed 8/30/91, effective 9/30/91; Order 113, § 360-44-030, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-030
 Operations and procedures. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-030, filed 5/28/92, effective 6/28/92. Statutory Authority:

- RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-030, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-040, filed 4/12/89. Statutory Authority: RCW 18.64.005, 18.81.080 and 42.17.290. 83-01-083 (Order 171), § 360-44-040, filed 12/17/82; Order 113, § 360-44-040, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-040 Public records available. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-040, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-040, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-050, filed 4/12/89; Order 113, § 360-44-050, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-050 Public records officer. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-050, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-060, filed 4/12/89; Order 113, § 360-44-060, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-060 Office hours. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-060, filed 8/30/91, effective 9/30/91; Order 113, § 360-44-070, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-070 Requests for public records. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-070, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-080, filed 4/12/89; Order 113, § 360-44-080, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-080 Copying. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-080, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-090, filed 4/12/89; Order 113, § 360-44-090, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-090 Exemptions. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-090, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-090, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-100, filed 4/12/89; Order 113, § 360-44-100, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-100 Review of denials of public records requests. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-100, filed 8/30/91, effective 9/30/91; Order 113, § 360-44-110, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-110 Protection of public records. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-110, filed 8/30/91, effective 9/30/91; Order 113, § 360-44-120, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-120 Index of public records available. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-120, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-120, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-130, filed 4/12/89; Order 113, § 360-44-130, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-130 Address where requests to be directed. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-130, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-130, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-140, filed 4/12/89; Order 113, § 360-44-140, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-140 Adoption of form. [Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-140, filed 8/30/91, effective 9/30/91; Order 113, § 360-44-150, filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.
- 246-893-998 Appendix A—Form. [Statutory Authority: RCW 42.17.250. 92-12-035 (Order 277B), § 246-893-998, filed 5/28/92, effective 6/28/92. Statutory Authority: RCW 18.64.005 and chapter 18.64A RCW. 91-18-057 (Order 191B), recodified as § 246-893-998, filed 8/30/91, effective 9/30/91. Statutory Authority: RCW 42.17.250. 89-09-020 (Order 224), § 360-44-990, filed 4/12/89; Order 113, Appendix A (codified as WAC 360-44-990), filed 4/27/73.] Repealed by 97-20-167, filed 10/1/97, effective 11/1/97. Statutory Authority: RCW 18.64.005.

Chapter 246-917

PHYSICIANS AND SURGEONS—BOARD OF MEDICAL EXAMINERS

- 246-917-020 Board meetings. [Statutory Authority: RCW 18.71.017. 91-20-170 (Order 203B), § 246-917-020, filed 10/2/91, effective 11/2/91; 91-06-030 (Order 147B), recodified as § 246-917-020, filed 2/26/91, effective 3/29/91; Order PL 136, § 308-52-010, filed 11/16/72; Rules (part), filed 12/18/63.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-025 Refunds. [Statutory Authority: RCW 18.71.017. 91-20-170 (Order 203B), § 246-917-025, filed 10/2/91, effective 11/2/91.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-026 Application withdrawals. [Statutory Authority: RCW 18.71.017. 91-24-051 (Order 218B), § 246-917-026, filed 11/27/91, effective 12/28/91.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-030 Approved United States and Canadian medical schools. [Statutory Authority: RCW 18.71.017. 91-06-030 (Order 147B), recodified as § 246-917-030, filed 2/26/91, effective 3/29/91; 81-03-079 (Order PL 369), § 308-52-120, filed 1/21/81; Order PL-278, § 308-52-120, filed 11/16/77.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-040 Postgraduate medical training defined. [Statutory Authority: RCW 18.71.017. 91-06-030 (Order 147B), recodified as § 246-917-040, filed 2/26/91, effective 3/29/91; 89-12-053 (Order PM 849), § 308-52-255, filed 6/5/89; 85-11-048 (Order PL 530), § 308-52-255, filed 5/16/85; 84-19-021 (Order PL 481), § 308-52-255, filed 9/12/84; 84-15-068 (Order PL 473), § 308-52-255, filed 7/18/84; 81-03-079 (Order PL 369), § 308-52-255, filed 1/21/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-050 Foreign medical graduates. [Statutory Authority: RCW 18.71.017. 91-06-030 (Order 147B), recodified as § 246-917-050, filed 2/26/91, effective 3/29/91; 81-03-079 (Order PL 369), § 308-52-040, filed 1/21/81; Order PL 240, § 308-52-040, filed 2/19/76; Order PL 183, § 308-52-040, filed 2/10/75; Order PL 136, § 308-52-040, filed 11/16/72; Rules (part), filed 12/18/63.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-060 AIDS prevention and information education requirements. [Statutory Authority: RCW 18.71.017. 91-06-030 (Order 147B), recodified as § 246-917-060, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 70.24.270. 89-06-076 (Order PM 821), § 308-52-620, filed 3/1/89.] Repealed by 96-03-073, filed 1/17/96,

- effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-070 Credentialing of physicians and surgeons. [Statutory Authority: RCW 18.71.017, 91-20-170 (Order 203B), § 246-917-070, filed 10/2/91, effective 11/2/91; 91-06-030 (Order 147B), recodified as § 246-917-070, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 18.71.017 and 18.71A.020. 88-21-047 (Order PM 782), § 308-52-600, filed 10/13/88.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-080 Examinations. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-080, filed 2/26/91, effective 3/29/91; Order PL 136, § 308-52-030, filed 11/16/72; Rules (part), filed 12/18/63.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-090 Applications for examination. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-090, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 18.71.017 and 18.72.070. 90-05-001 (Order 031), § 308-52-100, filed 2/8/90, effective 3/11/90. Statutory Authority: RCW 18.71.017, 84-15-068 (Order PL 473), § 308-52-100, filed 7/18/84; Order PL 136, § 308-52-100, filed 11/16/72; Rules (part), filed 1/12/65.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-100 Examination scores. [Statutory Authority: RCW 18.71A.020, 18.71.017, 18.71.060 and 18.71.070. 94-15-064, § 246-917-100, filed 7/19/94, effective 8/19/94. Statutory Authority: RCW 18.71.060 and 18.71.070. 93-21-017, § 246-917-100, filed 10/11/93, effective 11/11/93. Statutory Authority: RCW 18.71.017, 91-06-038 (Order 148B), § 246-917-100, filed 2/28/91, effective 3/31/91; 91-06-030 (Order 147B), recodified as § 246-917-100, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 18.71.017 and 18.17.070 [18.71.070]. 90-18-009 (Order 083), § 308-52-260, filed 8/24/90, effective 9/24/90. Statutory Authority: RCW 18.71.017, 89-06-077 (Order PM 822), § 308-52-260, filed 3/1/89; 85-03-084 (Order PL 508), § 308-52-260, filed 1/18/85; 79-06-063 (Order PL 304), § 308-52-260, filed 5/23/79; 78-04-028 (Order PL 284, Resolution No. 78-139), § 308-52-260, filed 3/14/78; Order PL 240, § 308-52-260, filed 2/19/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-110 FLEX examination standards. [Statutory Authority: RCW 18.71.060 and 18.71.070. 93-21-017, § 246-917-110, filed 10/11/93, effective 11/11/93. Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-110, filed 2/26/91, effective 3/29/91; 89-12-053 (Order PM 849), § 308-52-265, filed 6/5/89.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-120 Examinations accepted for reciprocity or waiver. [Statutory Authority: RCW 18.71A.020, 18.71.017, 18.71.060 and 18.71.070. 94-15-064, § 246-917-120, filed 7/19/94, effective 8/19/94. Statutory Authority: RCW 18.71.060 and 18.71.070. 93-21-017, § 246-917-120, filed 10/11/93, effective 11/11/93. Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-120, filed 2/26/91, effective 3/29/91; 86-03-056 (Order PL 577), § 308-52-270, filed 1/15/86; 85-03-084 (Order PL 508), § 308-52-270, filed 1/18/85; 78-04-028 (Order PL 284, Resolution No. 78-139), § 308-52-270, filed 3/14/78; Order PL 268, § 308-52-270, filed 5/11/77; Order PL 240, § 308-52-270, filed 2/19/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-121 Special purpose examination. [Statutory Authority: RCW 18.130.250, 93-11-008 (Order 360B), § 246-917-121, filed 5/5/93, effective 6/5/93. Statutory Authority: RCW 18.71.017, 91-20-170 (Order 203B), § 246-917-121, filed 10/2/91, effective 11/2/91.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-125 Temporary permits—Recognized jurisdictions. [Statutory Authority: RCW 18.71.017, 92-08-021 (Order 257B), § 246-917-125, filed 3/20/92, effective 4/20/92.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-126 Temporary permits—Issuance and duration. [Statutory Authority: RCW 18.71.017, 92-08-021 (Order 257B), § 246-917-126, filed 3/20/92, effective 4/20/92.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-130 License renewal. [Statutory Authority: RCW 18.71.017, 91-20-170 (Order 203B), § 246-917-130, filed 10/2/91, effective 11/2/91; 91-06-030 (Order 147B), recodified as § 246-917-130, filed 2/26/91, effective 3/29/91; Order PL 242, § 308-52-320, filed 3/15/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-135 License renewal form. [Statutory Authority: RCW 18.130.250, 93-01-078 (Order 321B), § 246-917-135, filed 12/14/92, effective 1/14/93.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-140 Scope. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-140, filed 2/26/91, effective 3/29/91; Order PL 247, § 308-52-400, filed 5/17/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-150 General requirements. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-150, filed 2/26/91, effective 3/29/91; 89-12-053 (Order PM 849), § 308-52-405, filed 6/5/89. Statutory Authority: RCW 18.71.080 and 18.71A.020. 85-23-043 (Order PL 565), § 308-52-405, filed 11/18/85. Statutory Authority: RCW 18.71.017, 79-06-063 (Order PL 304), § 308-52-405, filed 5/23/79; Order PL 247, § 308-52-405, filed 5/17/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-160 CME requirements during cycle revision. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-160, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 18.71.080 and 18.71A.020. 85-23-043 (Order PL 565), § 308-52-406, filed 11/18/85. Statutory Authority: RCW 18.71.080. 81-23-051 (Order PL 386), § 308-52-406, filed 11/18/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-170 Categories of creditable continuing medical education activities. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-170, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 18.71.080 and 18.71A.020. 85-23-043 (Order PL 565), § 308-52-410, filed 11/18/85; Order PL 247, § 308-52-410, filed 5/17/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-180 Continuing medical education requirement. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-180, filed 2/26/91, effective 3/29/91; 89-12-053 (Order PM 849), § 308-52-415, filed 6/5/89. Statutory Authority: RCW 18.71.080 and 18.71A.020. 85-23-043 (Order PL 565), § 308-52-415, filed 11/18/85; Order PL 247, § 308-52-415, filed 5/17/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-190 Approval not required. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-190, filed 2/26/91, effective 3/29/91; Order PL 247, § 308-52-420, filed 5/17/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-200 Certification of compliance. [Statutory Authority: RCW 18.71.017, 91-06-030 (Order 147B), recodified as § 246-917-200, filed 2/26/91, effective 3/29/91; Order PL 247, § 308-52-425, filed 5/17/76.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-210 Brief adjudicative proceedings—Denials based on failure to meet education, experience, or examination prerequisites for licensure. [Statutory Authority: Chapters 18.71 and 34.05 RCW, 91-18-036 (Order 192B), § 246-917-210, filed 8/29/91, effective 9/29/91.] Repealed by

- 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-220 Adjudicative proceedings. [Statutory Authority: RCW 18.71.060 and 18.71.070. 93-21-017, § 246-917-220, filed 10/11/93, effective 11/11/93.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-300 Retired active physician license. [Statutory Authority: RCW 18.130.250. 93-01-078 (Order 321B), § 246-917-300, filed 12/14/92, effective 1/14/93.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-917-990 Physician and surgeon fees. [Statutory Authority: RCW 43.70.250. 93-16-102, § 246-917-990, filed 8/4/93, effective 9/4/93; 92-08-062 (Order 258), § 246-917-990, filed 3/27/92, effective 4/27/92. Statutory Authority: RCW 43.70.040. 91-06-027 (Order 131), § 246-917-990, filed 2/26/91, effective 3/29/91.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- Chapter 246-920**
PHYSICIANS AND SURGEONS—MEDICAL DISCIPLINARY BOARD
- 246-920-020 Prescriptions—Schedule II stimulant drugs. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-020, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150(1). 79-02-044 (Order 296, Resolution No. 296), § 320-18-010, filed 1/29/79.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-030 Cooperation with investigation. [Statutory Authority: RCW 18.72.150. 92-23-035 (Order 316B), § 246-920-030, filed 11/13/92, effective 12/14/92; 91-02-012 (Order 105B), recodified as § 246-920-030, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.130.050. 88-04-080 (Order PM 703), § 320-18-020, filed 2/3/88.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-040 Use of drugs or autotransfusion to enhance athletic ability. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-040, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.130.050(1). 88-14-112 (Order 744), § 320-18-030, filed 7/6/88.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-120 Construction. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-120, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-001, filed 7/1/87.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-130 Responsibility for maintaining mailing address on file with the board. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-130, filed 12/21/90, effective 1/21/91. Statutory Authority: Chapter 18.72 RCW. 90-20-049 (Order 092), § 320-08-002, filed 9/26/90, effective 10/27/90.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-140 Appearance and practice before agency—Who may appear. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-140, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-010, filed 7/1/87; Rule 320-08-010, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-150 Appearance and practice before agency—Solicitation of business unethical. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-150, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-030, filed 7/1/87; Rule 320-08-020, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-160 Appearance and practice before agency—Standards of ethical conduct. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-160, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-170 Appearance and practice before agency—Appearance by former member of attorney general's staff. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-170, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-040, filed 7/1/87; Rule 320-08-030, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-180 Appearance and practice before agency—Former employee and board member as witness. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-180, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-055, filed 7/1/87.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-190 Computation of time. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-190, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-070, filed 7/1/87; Rule 320-08-050, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-200 Notice and opportunity for hearing in contested cases. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-200, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-080, filed 7/1/87; Rule 320-08-060, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-210 Service of process—By whom served. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-210, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-090, filed 7/1/87; Rule 320-08-070, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-220 Service of process—Upon whom served. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-220, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-100, filed 7/1/87; Rule 320-08-080, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-230 Service of process—Service upon parties. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-230, filed 12/21/90, effective 1/21/91; Rule 320-08-090, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-240 Service of process—Method of service. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-240, filed 12/21/90, effective 1/21/91; Rule 320-08-100, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-250 Service of process—When service complete. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-250, filed 12/21/90, effective 1/21/91; Rule 320-08-110, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-260 Service of process—Filing with Washington state medical disciplinary board. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-260, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and

- 246-920-480 Depositions upon interrogatories—Provisions of deposition rule. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-480, filed 12/21/90, effective 1/21/91; Rule 320-08-340, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-490 Official notice—Matters of law. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-490, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-370, filed 7/1/87; Rule 320-08-350, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-500 Official notice—Material facts. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-500, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-380, filed 7/1/87; Rule 320-08-360, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-510 Presumptions. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-510, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-390, filed 7/1/87; Rule 320-08-370, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-520 Stipulations and admissions of record. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-520, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-400, filed 7/1/87; Rule 320-08-380, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-530 Form and content of decisions in contested cases. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-530, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-410, filed 7/1/87; Rule 320-08-390, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-540 Definition of issues before hearing. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-540, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-420, filed 7/1/87; Rule 320-08-400, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-550 Prehearing conference rule—Authorized. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-550, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-430, filed 7/1/87; Rule 320-08-410, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-560 Prehearing conference rule—Record of conference action. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-560, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-440, filed 7/1/87; Rule 320-08-420, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-570 Motions. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-570, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-445, filed 7/1/87.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-580 Submission of documentary evidence in advance. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-580, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-450, filed 7/1/87; Rule 320-08-430, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-590 Excerpts from documentary evidence. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-590, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-460, filed 7/1/87; Rule 320-08-440, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-600 Expert or opinion testimony and testimony based on economic and statistical data—Number and qualifications of witnesses. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-600, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-470, filed 7/1/87; Rule 320-08-450, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-610 Continuances. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-610, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-510, filed 7/1/87; Rule 320-08-460, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-620 Rules of evidence—Admissibility criteria. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-620, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-520, filed 7/1/87; Rule 320-08-470, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-630 Rules of evidence—Tentative admission—Exclusion—Discontinuance—Objections. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-630, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-530, filed 7/1/87; Rule 320-08-480, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-640 Petitions for rule making, amendment or repeal—Who may petition. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-640, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-053 (Order PM 660), § 320-08-540, filed 7/1/87; Rule 320-08-490, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-650 Petitions for rule making, amendment or repeal—Requirements. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-650, filed 12/21/90, effective 1/21/91; Rule 320-08-500, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-660 Petitions for rule making, amendment or repeal—Agency must consider. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-660, filed 12/21/90, effective 1/21/91; Rule 320-08-510, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-670 Petitions for rule making, amendment or repeal—Notice of disposition. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-670, filed 12/21/90, effective 1/21/91; Rule 320-08-520, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
- 246-920-680 Declaratory rulings. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as §

	246-920-680, filed 12/21/90, effective 1/21/91; Rule 320-08-530, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.		91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-690	Forms. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-690, filed 12/21/90, effective 1/21/91; Rule 320-08-540, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-830	Residential requirement. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-830, filed 12/21/90, effective 1/21/91; Rule 320-12-020, filed 12/14/64.] Repealed by 91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-710	General provisions. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-710, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-20-010, filed 6/30/87. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-010, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-840	Nominating petitions. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-840, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-12-030, filed 6/30/87. Statutory Authority: RCW 18.72.150. 82-01-066 (Order PL 388), § 320-12-030, filed 12/18/81; Rule 320-12-030, filed 12/14/64.] Repealed by 91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-720	Mandatory reporting. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-720, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-20-020, filed 6/30/87. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-020, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-850	Eligibility requirement in elections. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-850, filed 12/21/90, effective 1/21/91; 82-01-066 (Order PL 388), § 320-12-040, filed 12/18/81; Rule 320-12-040, filed 12/14/64.] Repealed by 91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-730	Health care institutions. [Statutory Authority: Chapter 18.72 RCW. 91-17-015 (Order 190B), § 246-920-730, filed 8/13/91, effective 9/13/91. Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-730, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-20-030, filed 6/30/87. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-030, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-860	Time of election—Ballots. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-860, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-12-050, filed 6/30/87. Statutory Authority: RCW 18.72.150. 82-01-066 (Order PL 388), § 320-12-050, filed 12/18/81; Rule 320-12-050, filed 12/14/64.] Repealed by 91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-740	Medical associations or societies. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-740, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-040, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-870	Identification by congressional district. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-870, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-12-060, filed 6/30/87. Statutory Authority: RCW 18.72.150. 82-01-066 (Order PL 388), § 320-12-060, filed 12/18/81; Rule 320-12-060, filed 12/14/64.] Repealed by 91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-750	Health care service contractors and disability insurance carriers. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-750, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-050, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-880	Ballots. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-880, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.150, 18.130.050 and 18.130.070. 87-14-047 (Order PM 659), § 320-12-070, filed 6/30/87. Statutory Authority: RCW 18.72.150. 82-01-066 (Order PL 388), § 320-12-070, filed 12/18/81; Rule 320-12-070, filed 12/14/64.] Repealed by 91-20-168 (Order 202B), filed 10/2/91, effective 11/2/91. Statutory Authority: RCW 18.72.150.
246-920-760	Courts. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-760, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-070, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.	246-920-890	Canvassing and certification. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-890, filed 12/21/90, effective 1/21/91; Rule 320-12-080, filed 12/14/64.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.
246-920-770	State and federal agencies. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-770, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-080, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.		
246-920-780	Professional standards review organizations. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-780, filed 12/21/90, effective 1/21/91. Statutory Authority: RCW 18.72.265. 80-16-024 (Order PL 360), § 320-20-090, filed 10/29/80, effective 1/1/81.] Repealed by 96-03-073, filed 1/17/96, effective 2/17/96. Statutory Authority: RCW 18.71.017 and 18.71A.020.		
246-920-820	Election years in congressional districts. [Statutory Authority: RCW 18.72.150. 91-02-012 (Order 105B), recodified as § 246-920-820, filed 12/21/90, effective 1/21/91; Rule 320-12-010, filed 12/14/64.] Repealed by		

Chapter 246-975 AMBULANCES

246-975-001	Declaration of purpose. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-010, filed 1/29/82; Order 1150, § 248-17-010, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
246-975-010	Definitions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-010, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 18.73 RCW. 89-22-108 (Order 007), § 248-17-020, filed 11/1/89, effective 12/2/89. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-020, filed 8/10/84; 82-19-080 (Order 1881), § 248-17-020, filed 9/21/82; 82-04-041 (Order 1752), § 248-17-020, filed 1/29/82; Order 1150, § 248-17-020, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed

- 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW. License(s) required. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-030, filed 1/29/82; Order 1150, § 248-17-030, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-030 License expiration dates. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-040, filed 1/29/82; Order 1150, § 248-17-040, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-040 License expiration dates. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-050, filed 1/29/82; Order 1150, § 248-17-050, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-050 Denial, suspension, revocation of license—Notice—Adjudicative proceeding. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-050, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 1989 1st ex.s. c 9 § 106. 90-06-019 (Order 039), § 248-17-060, filed 2/28/90, effective 3/1/90; Order 1150, § 248-17-060, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-060 Ambulance vehicle and equipment. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-060, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-070, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-070 Extrication equipment. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-19-080 (Order 1881), § 248-17-080, filed 9/21/82; Order 1150, § 248-17-080, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-080 Variances. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-080, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-090, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-090 Radio communications equipment—Ambulance vehicle. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-090, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-100, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-100 First aid vehicle and equipment. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-19-080 (Order 1881), § 248-17-110, filed 9/21/82; Order 1150, § 248-17-110, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-110 Extrication equipment. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-19-080 (Order 1881), § 248-17-120, filed 9/21/82; Order 1150, § 248-17-120, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-120 Variances. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-120, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-130, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-130 Air ambulance services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-135, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-140 Radio communications equipment. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-140, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-140, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-150 Variances from the requirements of this chapter. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-150, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-150, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-160 Ambulance operator, ambulance director record requirements. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order 126), § 246-975-160, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-160, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-160, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-170 Liability insurance. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-170, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-170, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-180 First aid vehicle operator, first aid vehicle director requirements. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order 126), § 246-975-180, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-180, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-180, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-190 Personnel requirements. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-19-080 (Order 1881), § 248-17-190, filed 9/21/82; Order 1150, § 248-17-190, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-200 Advanced first aid training. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order 126), § 246-975-200, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-200, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-200, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-210 Basic life support—Emergency medical technician qualifications and training. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order 126), § 246-975-210, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-211, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-220 Emergency medical technician training—Course content, registration, and instructor qualifications. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order

- 126), § 246-975-220, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-212, filed 8/10/84; 82-04-041 (Order 1752), § 248-17-212, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-230 Emergency medical technician—Certification and recertification. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.081. 91-02-013, (Order 120), § 248-17-213, filed 12/21/90, effective 1/21/90. Statutory Authority: Chapter 18.73 RCW. 89-22-108 (Order 007), § 248-17-213, filed 11/1/89, effective 12/2/89. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-213, filed 8/10/84; 82-19-080 (Order 1881), § 248-17-213, filed 9/21/82; 82-04-041 (Order 1752), § 248-17-213, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-240 Emergency medical technician—Reciprocity and challenges. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order 126), § 246-975-240, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-214, filed 8/10/84; 82-04-041 (Order 1752), § 248-17-214, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-250 Emergency medical technician and first responder—Specialized training. [Statutory Authority: Chapter 18.73 RCW. 91-06-026 (Order 126), § 246-975-250, filed 2/26/91, effective 3/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-215, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-260 Emergency medical technician—Scope of care authorized—Prohibition. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-260, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 82-04-041 (Order 1752), § 248-17-216, filed 1/29/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-270 Revocation, suspension or modification of certificate. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-270, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-220, filed 8/10/84; 82-19-080 (Order 1881), § 248-17-220, filed 9/21/82; Order 1150, § 248-17-220, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-280 Notice of decision—Adjudicative proceeding. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-280, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 1989 1st ex.s. c 9 § 106. 90-06-019 (Order 039), § 248-17-230, filed 2/28/90, effective 3/1/90; Order 1150, § 248-17-230, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-290 Inspections and investigations. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-290, filed 12/27/90, effective 1/31/91; Order 1150, § 248-17-240, filed 9/2/76.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-300 First responder qualifications and training. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-300, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-250, filed 8/10/84.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-310 First responder training course contents, registration and instructor qualification. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-310, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-255, filed 8/10/84.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-320 First responder—Certification and recertification. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-320, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 18.73 RCW. 89-22-108 (Order 007), § 248-17-260, filed 11/1/89, effective 12/2/89. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-260, filed 8/10/84.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-330 Recertification—General requirements. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-330, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 18.73 RCW. 89-22-108 (Order 007), § 248-17-261, filed 11/1/89, effective 12/2/89.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-340 First responder—Reciprocity, challenges and reinstatement. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-340, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-265, filed 8/10/84.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-350 First responder—Scope of care authorized, prohibited. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-350, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-270, filed 8/10/84.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-360 First responder—Revocation or suspension of certificate. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-360, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.73.080. 84-17-036 (Order 2138), § 248-17-275, filed 8/10/84.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-975-990 Ambulances and first-aid vehicles licensing and inspection fees. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-975-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20B.110. 89-16-064 (Order 2839), § 440-44-023, filed 7/31/89, effective 8/31/89. Statutory Authority: 1982 c 201. 82-13-011 (Order 1825), § 440-44-023, filed 6/4/82.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

Chapter 246-977

ADVANCED LIFE SUPPORT TECHNICIANS

- 246-977-001 Declaration of purpose. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 78-09-055 (Order 1329), § 248-15-010, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.
- 246-977-010 Definitions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 87-19-025 (Order 2532), § 248-15-020, filed

9/10/87; 84-17-035 (Order 2137), § 248-15-020, filed 8/10/84; 81-23-016 (Order 1718), § 248-15-020, filed 11/12/81; 78-09-055 (Order 1329), § 248-15-020, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-020 Medical program director. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 87-19-025 (Order 2532), § 248-15-025, filed 9/10/87.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-030 Physician's trained mobile intravenous therapy technician—Airway management technician—Mobile intensive care paramedic, selection, general training, and knowledge standards. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 84-17-035 (Order 2137), § 248-15-030, filed 8/10/84; 81-23-016 (Order 1718), § 248-15-030, filed 11/12/81; 78-09-055 (Order 1329), § 248-15-030, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-040 Physician's trained mobile IV therapy technician—Training and knowledge standards. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 89-06-003 (Order 2764), § 248-15-040, filed 2/16/89; 78-09-055 (Order 1329), § 248-15-040, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-050 Physician's trained mobile airway management technician—Training and knowledge standards. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 89-06-003 (Order 2764), § 248-15-050, filed 2/16/89; 81-23-016 (Order 1718), § 248-15-050, filed 11/12/81; 78-09-055 (Order 1329), § 248-15-050, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-060 Physician's trained mobile intensive care paramedic—Training and knowledge standards. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 78-09-055 (Order 1329), § 248-15-060, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-070 Testing. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 78-09-055 (Order 1329), § 248-15-070, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-080 Certification and recertification. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 84-17-035 (Order 2137), § 248-15-080, filed 8/10/84; 81-23-016 (Order 1718), § 248-15-080, filed 11/12/81; 78-09-055 (Order 1329), § 248-15-080, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-090 Certification of individuals who have not completed a training course conducted by approved training physicians in the state of Washington. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 81-23-016 (Order 1718), § 248-15-091, filed 11/12/81.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-100 Revocation, suspension or modification of certificate. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 18.71.205. 84-17-035 (Order 2137), § 248-15-100, filed 8/10/84; 78-09-055 (Order 1329), § 248-15-100, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

246-977-110 Notice of decision—Adjudicative proceeding. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-977-110, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 18.71.205. 90-06-019 (Order 039), § 248-15-110, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 18.71.205. 78-09-055 (Order 1329), § 248-15-110, filed 8/22/78.] Repealed by 93-01-148 (Order 323), filed 12/23/92, effective 1/23/93. Statutory Authority: RCW 43.70.040 and chapters 18.71, 18.73 and 70.168 RCW.

Chapter 246-01 WAC DESCRIPTION AND ORGANIZATION

WAC

246-01-001	Purpose and authority.
246-01-010	Definitions.
246-01-020	Functions.
246-01-030	Secretary.
246-01-040	Department and professional boards—Relationship.
246-01-050	Department and state board of health—Relationship.
246-01-060	Department and local health departments/districts—Relationship.
246-01-070	Department and health professions resource committee—Relationship.
246-01-080	Organization.
246-01-090	Consumer assistance.
246-01-100	Current address.

WAC 246-01-001 Purpose and authority. (1) The purpose of this chapter is to describe the department of health and the general course and method of its operations. This chapter is adopted pursuant to RCW 34.05.220 and 42.17.250, and chapter 43.70 RCW.

(2) The department of health is charged with preserving public health, monitoring health care costs, maintaining minimal standards for quality in health care delivery, and generally overseeing and planning the state's activities as they relate to the health of its citizenry.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-001, filed 3/24/93, effective 4/24/93.]

WAC 246-01-010 Definitions. As used in this chapter:

- (1) "Department" means the department of health.
- (2) "Secretary" means the secretary of the department of health or the secretary's designee.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-010, filed 3/24/93, effective 4/24/93.]

WAC 246-01-020 Functions. The department balances its three core functions to accomplish its mission:

(1) Assessment. To regularly assess state health needs and resources, the department shall:

(a) Collect data on health status, personal health services, and the environment;

(b) Address major health problems in the state or community and population groups at greatest risk; availability and quality of service; resource availability; and the primary concerns of both citizens and providers; and

(c) Make budget and program revisions based on this assessment.

(2) Policy development. To develop and implement sound public policy, the department includes:

- (a) Knowledge gained from assessment;
- (b) Consideration of the political, organizational, and community environments;
- (c) Citizen participation; and
- (d) Cooperation with the state board of health and other state and local agencies.

(3) Assurance. To ensure the capacity of public health agencies to manage day-to-day operations and to respond to public health emergencies, the department shall:

- (a) Provide direct support when costs to replicate services in each local area would be prohibitive;
- (b) Provide technical assistance when services can be provided more effectively by local health agencies; and
- (c) Provide quality service.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-020, filed 3/24/93, effective 4/24/93.]

WAC 246-01-030 Secretary. (1) The secretary is appointed by, and serves at the pleasure of, the governor. In addition to other powers, the secretary may:

- (a) Adopt rules;
- (b) Appoint advisory committees on areas of emerging concern;
- (c) Undertake studies, research, and analyses;
- (d) Delegate powers, duties, and functions;
- (e) Enter into contracts on behalf of the department; and
- (f) Act for the state in the initiation of, or the participation in, intergovernmental programs.

(2) In case of the absence or disability of the secretary, or in case the office of secretary becomes vacant, the deputy secretary shall have full charge and supervision of the department and shall have the same power and authority to act as the secretary.

(3) In the case of the absence or disability of the secretary and the deputy secretary, the person designated "acting secretary" shall have the same power and authority to act as the secretary. If no person has been so designated, then the power to act as acting secretary shall be vested in any of the assistant secretaries designated in WAC 246-01-080, in the order in which they are listed therein.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-030, filed 3/24/93, effective 4/24/93.]

WAC 246-01-040 Department and professional boards—Relationship. The department works with the following professional boards, commissions, committees, and councils which have varying degrees of statutory authority, ranging from advisory powers to rule adoption and disciplinary powers:

- Health professions quality assurance committee.
- Chiropractic quality assurance commission.
- Dental quality assurance commission.
- Dental hygiene examining committee.
- Board of denture technology.
- Dispensing opticians examining committee.
- Board on fitting and dispensing of hearing aids.

- Massage examining board.
- Medical quality assurance commission.
- Mental health quality assurance council.
- Midwifery advisory committee.
- Naturopathic advisory committee.
- Nursing home administrators board.
- Nursing care quality assurance commission.
- Board of occupational therapy.
- Optometry board.
- Board of osteopathic medicine and surgery.
- Board of pharmacy.
- Board of physical therapy.
- Podiatry board.
- Examining board of psychology.
- Sex offender treatment provider advisory committee.
- Veterinary board of governors.

[Statutory Authority: RCW 43.70.040. 95-10-043, § 246-01-040, filed 5/1/95, effective 6/1/95. Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-040, filed 3/24/93, effective 4/24/93.]

WAC 246-01-050 Department and state board of health—Relationship. (1) The secretary serves as a member of the state board of health.

(2) The state board of health may advise the secretary on health policy issues pertaining to the department and the state.

(3) The state board of health has statutory authority to adopt rules to protect the public health, and may delegate this authority to the secretary and rescind such delegated authority.

(4) The department enforces the rules, regulations, and orders of the state board of health.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-050, filed 3/24/93, effective 4/24/93.]

WAC 246-01-060 Department and local health departments/districts—Relationship. (1) The department works with local health departments/districts in partnership to promote public health.

(2) The department provides notification of outbreaks and epidemics of disease that may occur and advises local departments/districts of the measures necessary to prevent and control such outbreaks and epidemics.

(3) Upon the request of a local health officer, the department may take legal action to enforce public health laws, rules, and regulations of the state board of health or local rules and regulations within the jurisdiction served by the local health department, and may institute any civil legal proceeding authorized by state law.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-060, filed 3/24/93, effective 4/24/93.]

WAC 246-01-070 Department and health professions resource committee—Relationship. (1) The health professions resource committee is comprised of representatives of the department, department of social and health services, higher education coordinating board, state board for community and technical colleges, and office of the superintendent of public instruction.

(2) The department serves as the lead administrative agency for the health professions resource committee.

(3) The health professions resource committee shall develop a statewide plan which identifies health personnel shortages and contains policies, designs, and strategies to implement activities to address and alleviate those shortages.

[Statutory Authority: RCW 43.70.050, 93-08-004 (Order 346), § 246-01-070, filed 3/24/93, effective 4/24/93.]

WAC 246-01-080 Organization. (1) The department is headed by the secretary. The office of the secretary provides overall agency management, and is comprised of the secretary, deputy secretary, state health officer, policy and planning, legislative and constituent relations, minority affairs, and the communications office.

(2) Six assistant secretaries direct specific programs within the department.

(a) *The assistant secretary for epidemiology and health statistics:*

(i) Collects and analyzes data that provides information about the health of the population, hospital costs, hospital diagnosis and procedures;

(ii) Collects information on all births, deaths, marriages, and divorces within the state and makes official documentation of these events available to the public;

(iii) Conducts surveillance of communicable and non-communicable diseases and other health-related events. Investigates disease outbreaks, epidemics, and clusters; provides technical assistance and advice in developing and implementing prevention/control programs; provides expert consultation to local health departments on epidemiologically impacted issues and, when necessary, directs support for responding to emergent public health situations;

(iv) Develops a health services information system that supports the implementation of health reform as envisioned under the Health Services Act of 1993, and monitors the effectiveness of the reformed health care environment;

(v) Monitors the consistency, quality, continuity, and comprehensiveness of the department's health assessment activities, including disease surveillance and program evaluation;

(iv) Provides a scientific basis for health policy and program management decisions within the department and, when requested, to local health departments.

(b) *The assistant secretary for health systems quality assurance:*

(i) Administers laws and enforces rules, regulations, and standards for the following professions:

Acupuncturists
Airway management technicians
Animal technicians
Chiropractic x-ray technicians
Controlled substance researchers
Counselors/registered & certified
Dental hygienists
Dentists
Denturists
Dieticians/nutritionists
Dispensing opticians

Doctors of chiropractic
Drug manufacturers & wholesalers
Emergency medical technicians
First responders
Health care assistants
Hearing aid fitters
Intravenous technicians
Legend drug sample distributors
Massage practitioners
Midwives
Naturopathic physicians
Nursing assistants
Nursing home administrators
Nursing pools
Occupational therapists
Occupational therapists' assistants
Ocularists
Optometrists
Osteopathic physicians and surgeons
Osteopathic physicians' assistants
Osteopathic physicians' acupuncture assistants
Pharmacists
Paramedics
Pharmacy assistants
Physical therapists
Physicians and surgeons
Physician assistants
Podiatric physicians and surgeons
Practical nurses
Psychologists
Radiological technologists
Registered nurses
Respiratory care practitioners
Sex offender treatment providers
Veterinarians
Veterinary med clerks
X-ray technicians

(ii) Sets standards, inspects, licenses, or certifies, provides consultation, and reviews and approves construction of new buildings, alterations, additions, and conversions of health and residential care facilities for:

Acute care hospitals
Adult residential rehabilitation centers
Alcoholism treatment facilities
Alcoholism hospitals
Ambulatory surgery centers
Boarding homes
Childbirth centers
Child day care centers
Comprehensive outpatient rehabilitation
Department of corrections facilities
Juvenile rehabilitation facilities
End stage renal disease centers
Eye banks
Ferry systems
Group care facilities for children
Home health care agencies
Home care agencies
Hospice agencies

Hospice care facilities
 Occupational therapist-independent practice
 Outpatient physical therapy/speech pathology
 Physical therapist-independent practice
 Private adult treatment homes
 Psychiatric hospitals
 Residential treatment facilities for psychiatrically impaired children & youth
 Rural health care facilities
 Rural health care clinics
 Soldiers' home
 State school for the blind
 State school for the deaf
 State hospitals for the mentally ill
 Temporary worker housing
 Transient accommodations
 Veterans' home

(iii) Regulates the development of various new health care facilities and services based on community need, financial feasibility, cost containment, and quality of care;

(iv) Establishes and promotes a system of emergency medical and trauma services, which includes: Developing, evaluating, and monitoring training programs; licensing and inspection; and technical assistance for a comprehensive statewide integrated emergency medical system; and

(v) Regulates clinical laboratory testing sites and practices.

(c) *The assistant secretary for community and family health* is responsible for assessing the health status of Washington state citizens regarding disease, injury, and nutrition; developing policy based on those assessments that will prevent disease, premature death and disability, and will promote health lifestyles and environments; and assuring access to quality services consistent with approved policy in the following areas:

(i) Comprehensive planning for health services for children and adolescents and their families and primary caretakers, including parenting education, nutrition consultation, oral health programs, teen pregnancy prevention and immunizations;

(ii) A continuum of services designed for infants or children with, or at risk for, special health care needs and their families;

(iii) High quality low cost, comprehensive family planning and reproductive health care services;

(iv) Health and support services for pregnant women, lactating and other post-partum women, and infants;

(v) Supplemental foods, nutrition education, and referral for health services for eligible pregnant women, lactating and other post-partum women, and infants and children at risk;

(vi) Programs to control the complications of diabetes and to identify and develop interventions for the prevention of death and disability from intentional and unintentional injury;

(vii) Public education and marketing campaigns on a spectrum of health related topics; programs which develop and supply health and safety educational materials to schools, local health, and community agencies;

(viii) Surveillance and services designed to reduce death and disease related to cancer, heart disease and stroke by providing public education/awareness programs, screening projects, professional education, and development of community coalitions;

(ix) Surveillance and services that interrupt the transmission of human immunodeficiency virus (HIV) and other sexually transmitted diseases (STD), and reduce associated morbidity and mortality by planning, as well as supporting the individual rights and human dignity of those infected and those considered at risk; and

(x) Surveillance and services that reduce the morbidity and mortality due to tuberculosis and vaccine-preventable disease.

(d) *The assistant secretary for environmental health* provides training, public education services, and technical assistance to local health agencies and other agencies; and provides direct surveillance, monitoring, and enforcement activities to prevent, control, and abate health hazards and nuisances related to:

(i) Contaminated shellfish;

(ii) Contamination due to illegal drug manufacturing and storage;

(iii) Disease-carrying insects and rodents;

(iv) Disposal of solid and liquid wastes;

(v) Food service sanitation;

(vi) On-site sewage disposal;

(vii) Public drinking water systems;

(viii) Ionizing radiation;

(ix) Schools, campgrounds, and parks;

(x) Toxic substance exposure; and

(xi) Water recreation facilities.

(e) *The assistant secretary for public health laboratories* oversees laboratories that aid in the diagnosis, treatment, and prevention of various diseases by:

(i) Testing and analyzing clinical and environmental specimens and samples including food, food products, shellfish, drinking water, and seawater;

(ii) Testing to detect certain treatable metabolic disorders in newborns;

(iii) Testing for radioactivity in materials, mine tailings, and ores; and

(iv) Performing inorganic and organic chemical analyses on drinking water, and other environmental samples such as soil, paint chips, ceramics and potteries, beverages, food, and others.

(f) *The assistant secretary for management services* provides administrative, financial, contracting, facility information processing, and human resource services to the department's operating programs.

(3)(a) Each assistant secretary is hereby delegated authority to administer the programs within their respective areas of responsibility, including, without limitation, the authority to sign documents on behalf of the secretary and the department. Each assistant secretary is authorized to further delegate his or her authority to such persons and in such manner as deemed necessary or appropriate in the management of the department's business.

(b) In the absence of the secretary, the following are authorized to act on behalf of the department:

- (i) The deputy secretary;
- (ii) In the absence of the deputy secretary, the state health officer;
- (iii) In the absence of the state health officer, the assistant secretary for management services;
- (iv) In the absence of all of the foregoing, any assistant secretary.

(c) Any person designated as "acting" in a position described in this section shall have the same authority while so designated as if she or he had been appointed to fill the position on a permanent basis.

[Statutory Authority: RCW 43.70.040. 95-10-043, § 246-01-080, filed 5/1/95, effective 6/1/95. Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-080, filed 3/24/93, effective 4/24/93.]

WAC 246-01-090 Consumer assistance. (1) The department provides a consumer assistance statewide toll-free hotline. Consumer assistance personnel assist the public with information, concerns, or complaints about the department and serve as advocates for consumers who are complainants or witnesses in a licensing or disciplinary proceeding. The health consumer assistance line is 1-800-525-0127; its mailing address is P.O. Box 47891, Olympia, WA 98504-7891.

(2) The public may send submissions or written requests for information concerning the course and method of the department's operation to: Rules Coordinator, Management Services, 1300 S.E. Quince Street, P.O. Box 47902, Olympia, WA 98504-7902.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-090, filed 3/24/93, effective 4/24/93.]

WAC 246-01-100 Current address. (1) Each person having a license issued by the department, each applicant for such a license, each recipient of benefits administered by the department, and each applicant for such benefits shall provide a current mailing address at the time of making application or reapplication.

(2) It is the responsibility of any such person to advise the appropriate office of the department in writing of any change in the address provided to the department.

(3) All official correspondence between the department and persons covered in this section shall be addressed to the most recent address provided to the department in writing by such person.

(4) For the purpose of this section, the term "license" shall have the meaning set forth in WAC 246-10-102.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-01-100, filed 3/24/93, effective 4/24/93.]

Chapter 246-03 WAC

**STATE ENVIRONMENTAL POLICY ACT—
GUIDELINES**

WAC

246-03-001	Purpose.
246-03-010	Definitions.
246-03-020	Adoption by reference.
246-03-030	Timing and procedures for specified major actions.
246-03-040	Exemptions for emergency actions.
246-03-050	Determination of lead agency and responsible official.
246-03-060	Recommended timing for threshold determination.

(2003 Ed.)

246-03-070	Threshold determination process.
246-03-080	Adjudicative proceeding.
246-03-090	Scoping.
246-03-100	Issuance of draft EIS.
246-03-110	Policies and procedures for conditioning or denying permits or other approvals.
246-03-120	Public hearings.
246-03-130	Responsibilities of the department as a consulted agency.
246-03-140	SEPA committee.
246-03-150	SEPA public information.
246-03-160	Severability.

WAC 246-03-001 Purpose. This chapter implements the statewide rules in chapter 197-11 WAC as they apply to the department of health. These rules are promulgated under RCW 43.21C.120 (the State Environmental Policy Act) and chapter 197-11 WAC (SEPA rules).

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-001, filed 12/27/90, effective 1/31/91.]

WAC 246-03-010 Definitions. In addition to the definitions contained in WAC 197-11-700 through 197-11-799, the following terms shall have the listed meanings:

Acting agency means an agency with jurisdiction which has received an application for a license, or which is proposing an action.

Agency guidelines shall mean chapter 246-03 WAC.

Department shall mean the department of health.

Environmental report shall mean a document prepared by the applicant, when required by the department, for use in the preparation of a draft EIS.

Licensing means the agency process in granting, renewing or modifying a license.

Private applicant means any person or entity, other than an agency as defined in this section, applying for a license from an agency.

Secretary shall mean the secretary of the department of health.

SEPA committee means the departmental committee which oversees the department's SEPA activities. The committee's composition and responsibilities are outlined in WAC 246-03-140.

SEPA guidelines shall mean chapter 197-11 WAC.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-010, filed 12/27/90, effective 1/31/91.]

WAC 246-03-020 Adoption by reference. The department of health adopts the following sections or subsections of chapter 197-11 WAC by reference:

WAC

197-11-010	Authority.
197-11-020	Purpose.
197-11-030	Policy.
197-11-040	Definitions.
197-11-050	Lead agency.
197-11-055	Timing of the SEPA process.
197-11-060	Content of environmental review.
197-11-070	Limitations on actions during SEPA process.
197-11-080	Incomplete or unavailable information.
197-11-090	Supporting documents.
197-11-100	Information required of applicants.

WAC		WAC	
197-11-300	Purpose of this part.	197-11-712	Affecting.
197-11-305	Categorical exemptions.	197-11-714	Agency.
197-11-310	Threshold determination required.	197-11-716	Applicant.
197-11-315	Environmental checklist.	197-11-718	Built environment.
197-11-330	Threshold determination process.	197-11-720	Categorical exemption.
197-11-335	Additional information.	197-11-722	Consolidated appeal.
197-11-340	Determination of nonsignificance (DNS).	197-11-724	Consulted agency.
197-11-350	Mitigated DNS.	197-11-726	Cost-benefit analysis.
197-11-360	Determination of significance (DS)/initiation of scoping.	197-11-728	County/city.
197-11-390	Effect of threshold determination.	197-11-730	Decision maker.
197-11-400	Purpose of EIS.	197-11-732	Department.
197-11-402	General requirements.	197-11-734	Determination of nonsignificance (DNS).
197-11-405	EIS types.	197-11-736	Determination of significance (DS).
197-11-406	EIS timing.	197-11-738	EIS.
197-11-408	Scoping.	197-11-740	Environment.
197-11-410	Expanded scoping. (Optional)	197-11-742	Environmental checklist.
197-11-420	EIS preparation.	197-11-744	Environmental document.
197-11-425	Style and size.	197-11-746	Environmental review.
197-11-430	Format.	197-11-748	Environmentally sensitive area.
197-11-435	Cover letter or memo.	197-11-750	Expanded scoping.
197-11-440	EIS contents.	197-11-752	Impacts.
197-11-442	Contents of EIS on nonproject proposals.	197-11-754	Incorporation by reference.
197-11-443	EIS contents when prior nonproject EIS.	197-11-756	Lands covered by water.
197-11-444	Elements of the environment.	197-11-758	Lead agency.
197-11-448	Relationship of EIS to other considerations.	197-11-760	License.
197-11-450	Cost-benefit analysis.	197-11-762	Local agency.
197-11-455	Issuance of DEIS.	197-11-764	Major action.
197-11-460	Issuance of FEIS.	197-11-766	Mitigated DNS.
197-11-500	Purpose of this part.	197-11-768	Mitigation.
197-11-502	Inviting comment.	197-11-770	Natural environment.
197-11-504	Availability and cost of environmental documents.	197-11-772	NEPA.
197-11-508	SEPA register.	197-11-774	Nonproject.
197-11-510	Public notice.	197-11-776	Phased review.
197-11-535	Public hearings and meetings.	197-11-778	Preparation.
197-11-545	Effect of no comment.	197-11-780	Private project.
197-11-550	Specificity of comments.	197-11-782	Probable.
197-11-560	FEIS response to comments.	197-11-784	Proposal.
197-11-570	Consulted agency costs to assist lead agency.	197-11-786	Reasonable alternative.
197-11-600	When to use existing environmental documents.	197-11-788	Responsible official.
197-11-610	Use of NEPA documents.	197-11-790	SEPA.
197-11-620	Supplemental environmental impact statement—Procedures.	197-11-792	Scope.
197-11-625	Addenda—Procedures.	197-11-793	Scoping.
197-11-630	Adoption—Procedures.	197-11-794	Significant.
197-11-635	Incorporation by reference—Procedures.	197-11-796	State agency.
197-11-640	Combining documents.	197-11-797	Threshold determination.
197-11-650	Purpose of this part.	197-11-799	Underlying governmental action.
197-11-655	Implementation.	197-11-800	Categorical exemptions.
197-11-660	Substantive authority and mitigation.	197-11-810	Exemptions and nonexemptions applicable to specific state agencies.
197-11-680	Appeals.	197-11-820	Department of licensing.
197-11-700	Definitions.	197-11-845	Department of social and health services.
197-11-702	Act.	197-11-880	Emergencies.
197-11-704	Action.	197-11-890	Petitioning DOE to change exemptions.
197-11-706	Addendum.	197-11-900	Purpose of this part.
197-11-708	Adoption.	197-11-902	Agency SEPA policies.
197-11-710	Affected tribe.	197-11-904	Agency SEPA procedures.
		197-11-906	Content and consistency of agency procedures.
		197-11-908	Environmentally sensitive areas.

WAC

- 197-11-910 Designation of responsible official.
- 197-11-912 Procedures on consulted agencies.
- 197-11-914 SEPA fees and costs.
- 197-11-916 Application to ongoing actions.
- 197-11-917 Relationship to chapter 197-10 WAC.
- 197-11-918 Lack of agency procedures.
- 197-11-920 Agencies with environmental expertise.
- 197-11-922 Lead agency rules.
- 197-11-924 Determining the lead agency.
- 197-11-926 Lead agency for governmental proposals.
- 197-11-928 Lead agency for public and private proposals.
- 197-11-930 Lead agency for private projects with one agency with jurisdiction.
- 197-11-932 Lead agency for private projects requiring licenses from more than one agency, when one of the agencies is a county/city.
- 197-11-934 Lead agency for private projects requiring licenses from a local agency, not a county/city, and one or more state agencies.
- 197-11-936 Lead agency for private projects requiring licenses from more than one state agency.
- 197-11-938 Lead agencies for specific proposals.
- 197-11-940 Transfer of lead agency status to a state agency.
- 197-11-942 Agreements on lead agency status.
- 197-11-944 Agreements on division of lead agency duties.
- 197-11-946 DOE resolution of lead agency disputes.
- 197-11-948 Assumption of lead agency status.
- 197-11-950 Severability.
- 197-11-955 Effective date.
- 197-11-960 Environmental checklist.
- 197-11-965 Adoption notice.
- 197-11-970 Determination of nonsignificance (DNS).
- 197-11-980 Determination of significance and scoping notice (DS).
- 197-11-985 Notice of assumption of lead agency status.
- 197-11-990 Notice of action.

[Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-03-020, filed 12/27/90, effective 1/31/91.]

WAC 246-03-030 Timing and procedures for specified major actions. (1) Regulations and licenses relating to radioactive material.

(a) Scope of major action.

(i) Regulations relating to radioactive material shall include the adoption or amendment by the department of any regulations incorporating general standards for issuance of licenses authorizing the possession, use and transfer of radioactive material pursuant to RCW 70.98.080, and 70.121.030.

(ii) The issuance, revocation or suspension of individual licenses under RCW 70.98.080 shall be exempt. However, the following licenses shall not be exempt: Licenses to operate low level waste burial facilities or licenses to operate or expand beyond design capacity mineral processing facilities, or their tailings areas, whose products, or byproducts, have concentrations of naturally occurring radioactive materials in excess of exempt concentrations as specified in WAC 246-232-010.

(2003 Ed.)

(b) Timing of SEPA requirements for regulations for radioactive material.

(i) A final EIS or determination of nonsignificance, whichever is determined appropriate by the lead agency's responsible official, shall be completed for proposed regulations relating to radioactive material prior to the hearing preceding final adoption of such regulations.

(ii) The responsible official shall mail to the department of ecology headquarters office in Olympia for listing in the "SEPA register" (see WAC 197-11-508) a copy of any determination of nonsignificance, a copy of the draft EIS, and a copy of the final EIS. Copies of the draft EIS shall also be mailed to those agencies identified in WAC 197-11-455, and of the final EIS to those agencies identified in WAC 197-11-460. The responsible official shall also give public notice in the form and manner specified in RCW 43.21C.080 of the determination of nonsignificance or final EIS.

(c) Timing of SEPA requirements for licenses for uranium or thorium mills or radioactive waste burial facilities.

(i) The applicant shall be responsible for completing an environmental checklist, furnishing additional information needed by the department to make the threshold determination, and preparing an environmental report regarding the environmental impact of proposed activities for independent evaluation by the department, prior to issuance of a draft EIS by the responsible official. The environmental report shall be submitted within ninety days following determination of significance. The following material presents a more detailed description of the responsibilities of the private applicant as well as of the responsible official.

(ii) The applicant shall be responsible for contacting the responsible official during the early stages of the applicants planning activities to obtain an outline of SEPA requirements.

(iii) Thereafter the private applicant shall be responsible for preparation of an environmental checklist. The responsible official shall review each environmental checklist and, within fifteen days of the responsible official's receipt of the checklist, shall prepare and issue either a determination of nonsignificance as per WAC 197-11-340 or a determination of significance as per WAC 197-11-360.

(iv) When the responsible official has issued a determination of nonsignificance, the official shall send the determination and environmental checklist to the applicant and to all agencies with jurisdiction for review and comment as per WAC 197-11-340.

(v) When the responsible official makes a determination of significance, the preparation of an environmental report shall be completed in a manner consistent with the requirements for a draft EIS and shall be the responsibility of the private applicant. If the applicant desires, he may contract with an outside consultant for the preparation of the environmental report. The department may also contract with an outside consultant for the preparation of a draft or final EIS. The department or the department's contracted consultant will independently evaluate the environmental report and be responsible for the reliability of any information used in the draft or final EIS. Unless the scope or complexity of the proposal indicates otherwise, the final EIS shall be issued as described in WAC 197-11-460(6).

[Title 246 WAC—p. 55]

(vi) The responsible official shall request review of the draft EIS from the agencies listed in WAC 197-11-455 and from such other agencies as he determines.

(vii) The responsible official shall mail a copy of the draft EIS to the department of ecology headquarters in Olympia for listing in the "SEPA register" (see WAC 197-11-508) and also to those agencies listed in WAC 197-11-455.

(viii) When the responsible official determines that substantial changes are needed or that new information has become available, the preparation of an amended or new environmental report is the responsibility of the private applicant.

(ix) The responsible official shall mail a copy of the final EIS to the department of ecology headquarters office in Olympia for listing in the "SEPA register" (see WAC 197-11-508). The responsible official shall also mail copies of the final EIS to those agencies specified in WAC 197-11-460 and shall give public notice of the completion of the final EIS in the form and manner specified in RCW 43.21C.080.

(2) Water system plans for public water systems as per WAC 246-290-100 and RCW 70.116.050.

(a) Scope of major action. Water system plans are plans developed and submitted to the department for review and approval pursuant to WAC 246-290-100 and RCW 70.116-050.

(b) Timing and procedures for water system plans prepared by private applicants.

(i) In general, when a private applicant has prepared a water system plan for review and approval by the department, the private applicant shall be responsible for completing an environmental checklist, furnishing additional information needed by the department to make the threshold determination, and preparing the draft and final EIS under the direction of the responsible official. The following material presents a more detailed description of the responsibilities of the private applicant as well as the responsible official.

(ii) Follow steps outlined in subsection (1)(c)(ii) through (iv) of this section.

(iii) When the responsible official makes a determination of significance, the preparation of a draft and final EIS shall be in compliance with WAC 197-11-400 through 197-11-620 and shall be the responsibility of the private applicant. If the applicant desires, he may contract with an outside consultant for preparation of the draft or final EIS. Unless the scope or complexity of the proposal indicates otherwise, the final EIS shall be completed within sixty days of the end of the comment period for the draft EIS.

(iv) See subsection (1)(c)(vi) and (vii) of this section.

(v) When the responsible official determines that substantial changes are needed or that new information has become available, the preparation of an amended or a new draft EIS is the responsibility of the private applicant.

(vi) See subsection (1)(c)(ix) of this section.

(vii) Every water system plan submitted by a private applicant to the department for review and approval shall be accompanied by either a determination of nonsignificance or a final EIS.

(c) Timing and procedure for water system plans prepared by agencies. Every water system plan submitted by an agency to the department for review and approval shall be

accompanied by either a determination of nonsignificance or a final EIS.

(3) New public water supply systems and major extensions of existing public water supply systems.

(a) Scope of major action. The approval of engineering reports or plans and specifications pursuant to chapter 246-290 WAC for all surface water source development, all water system storage facilities greater than one-half million gallons, new transmission lines longer than one thousand feet and larger than eight inches in diameter located in new rights of way and major extensions to existing water distribution systems involving use of pipes greater than eight inches in diameter, which are designed to increase the existing service area by more than one square mile.

(b) Timing and procedures for projects proposed by private applicants.

(i) In general, when a private applicant seeks the approval of the department for a new public water supply or a major extension to an existing public water supply, the private applicant shall be responsible for completing an environmental checklist, furnishing additional information needed by the department to make the threshold determination, and preparing the draft and final EIS under the direction of the responsible official. The following material presents a more detailed description of the responsibilities of the private applicant as well as of the responsible official.

(ii) Follow steps outlined in subsection (1)(c)(ii) through (iv) of this section.

(iii) See subsection (2)(b)(iii) of this section.

(iv) See subsection (1)(c)(vi) and (vii) of this section.

(v) See subsection (2)(b)(v) of this section.

(vi) See subsection (1)(c)(ix) of this section.

(vii) Whenever preliminary engineering reports, or plans and specifications for a new public water supply system or a major extension to an existing public water supply system are submitted by a private applicant to the secretary for review and approval pursuant to chapter 246-290 WAC, these reports, plans and specifications shall be accompanied by a determination of nonsignificance or a final EIS.

(c) Timing and procedures for projects proposed by an agency. Whenever preliminary engineering reports, plans and specifications for a new public water supply system or a major extension to an existing public water supply system are submitted by an agency to the secretary for review and approval pursuant to chapter 246-290 WAC, these reports, plans and specifications shall be accompanied by a determination of nonsignificance or a final EIS.

(4) Certificates of need.

(a) Scope of major action. Certificate of need applications are subject to SEPA requirements whenever the applicant proposes to construct a new hospital or to construct major additions to the existing service capacity of such an institution: Provided, That such applications are not subject to SEPA requirements when the proposed construction consists of additions which provide less than twelve thousand square feet of floor area and with associated parking facilities designed for forty automobiles or less: Provided further, That certificate of need applications for "substantial acquisitions" are not subject to SEPA requirements.

(b) Timing and procedures for hospital certificates of need. Where a state or local agency other than the department is lead agency for hospital construction, the department shall not issue a certificate of need approving this hospital construction until the applicant has supplied it with a determination of nonsignificance or a final EIS, and until seven days after the issuance by the lead agency of any final EIS. Nothing in this subsection shall preclude the department from making a commitment to issue a certificate of need to an applicant subject to the timely receipt of an appropriate environmental impact statement or determination of nonsignificance.

(5) Approval of sewerage general plans and/or water general plans described in RCW 36.94.010.

(a) Scope of major action. Sewerage general plans and water general plans shall mean and include those described in RCW 36.94.010.

(b) Timing and procedures for water general plans. Every water general plan submitted by a county to the department for review and approval shall be accompanied by either a determination of nonsignificance or a final EIS.

(6) Plans and specifications for new sewage treatment works or for major extensions to existing sewage treatment works pursuant to chapter 246-271 WAC.

Scope of major action. Plans and specifications for new sewage treatment works or for major extensions to existing sewage treatment works are those which are reviewed and approved by the department pursuant to WAC 246-271-050.

(7) Construction of any building, facility or other installation for the purpose of housing department personnel or for prisons or for fulfilling other statutorily directed or authorized functions.

(a) Scope of major action. The construction of buildings, facilities or other installations for the purpose of housing department personnel or for other authorized functions shall be subject to SEPA requirements, but such construction shall not be subject to SEPA requirements when it consists of additions which provide less than twelve thousand square feet of floor area and with associated parking facilities designed for forty automobiles or less.

(b) Timing and procedures.

(i) The responsible official shall, prior to the request for construction bids, prepare an environmental checklist for each construction project of the type described in (a) of this subsection.

(ii) Within fifteen days of the request for construction bids, the responsible official shall make (A) a written declaration of nonsignificance where the responsible official determines that the proposed construction will not have a significant adverse environmental impact or (B) a written declaration of significance where the responsible official determines that the proposed construction will have a significant adverse environmental impact.

(iii) Where the responsible official has made a determination of significance, the preparation of the draft and final EIS shall be in compliance with WAC 197-11-400 through 197-11-620, and shall be the responsibility of the responsible official. Unless the scope or complexity of the proposal indi-

cates otherwise, the final EIS shall be completed within sixty days of the end of the comment period for the draft EIS.

(iv) See subsection (1)(c)(vi) of this section.

(v) The responsible official shall mail to the department of ecology headquarters office in Olympia for listing in the "SEPA register" a copy of any determination of nonsignificance, a copy of the draft EIS, and a copy of the final EIS. Copies of the draft EIS shall also be mailed to those agencies identified in WAC 197-11-455, and of the final EIS to those agencies identified in WAC 197-11-460. The responsible official shall also give public notice in the form and manner specified in RCW 43.21C.080 of the determination of nonsignificance or final EIS.

(8) Approval of final plans for construction of a private psychiatric hospital pursuant to WAC 246-322-020, or construction of an alcoholism treatment facility pursuant to WAC 246-326-020.

(a) Scope of major action. The approval of final plans for construction of a private psychiatric hospital pursuant to WAC 246-322-020, or construction of an alcoholism treatment center pursuant to WAC 246-326-020 shall be subject to SEPA requirements: Provided, That such construction shall not be subject to SEPA requirements when it consists of additions which provide less than twelve thousand square feet of floor area and with associated parking facilities designed for forty automobiles or less.

(b) Timing and procedures for construction of the type described. Where a state or local agency other than the department is lead agency for construction of the type described in (a) of this subsection, the department shall not approve final plans for construction of a private psychiatric hospital or alcoholism treatment center until the applicant for such approval has supplied the department with a final declaration of nonsignificance or a final EIS for the construction in question, and until seven days after the issuance by the lead agency of any final EIS.

[Statutory Authority: RCW 43.21C.120. 92-02-018 (Order 224), § 246-03-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-030, filed 12/27/90, effective 1/31/91.]

WAC 246-03-040 Exemptions for emergency actions.

If the secretary makes a written declaration that actions must be undertaken immediately or within a time too short to allow full compliance with SEPA requirements; and that such actions are necessary to avoid an imminent threat to public health or safety, or to prevent an imminent danger to public or private property, or to prevent an imminent threat of serious environmental degradation; then such actions may be undertaken without complying with SEPA requirements: Provided, That the department is the lead agency for such actions.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-040, filed 12/27/90, effective 1/31/91.]

WAC 246-03-050 Determination of lead agency and responsible official. (1) The department shall be the lead agency for the following actions:

(a) Adoption or amendment of regulations relating to radioactive source materials; proposals to construct, operate,

or expand any uranium or thorium mill, or any tailings areas generated by uranium or thorium milling, or any low level radioactive waste burial facilities. The responsible official would be the division director, division of radiation protection, environmental health programs. Lead agency determination for other mineral processing proposals should be made in accordance with WAC 197-11-924 through 197-11-948;

(b) Approval of comprehensive plans for public water supply systems when such plans are developed by private applicants and unless indicated otherwise by WAC 197-11-932, 197-11-934 and 197-11-936, and approval of new public water supply systems or major extensions of existing public water supply systems when such systems are being proposed by a private applicant unless indicated otherwise by WAC 197-11-932, 197-11-934, and 197-11-936. The responsible official would be the section head, water supply and waste section, division of environmental health;

(c) Construction of any building, facility, or other installation for the purpose of housing department personnel or for fulfilling other statutorily directed or authorized functions. The responsible official would be a capital programs representative from the management services division, comptroller's office;

(2) Determination of the lead agency for department major actions not listed above shall be made in accordance with the procedures and requirements of WAC 246-03-140 (4)(c) and 197-11-922 through 197-11-948.

[Statutory Authority: RCW 43.21C.120. 92-02-018 (Order 224), § 246-03-050, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-050, filed 12/27/90, effective 1/31/91.]

WAC 246-03-060 Recommended timing for threshold determination. In most cases the time required to complete a threshold determination should not exceed fifteen days. (WAC 197-11-310.)

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-060, filed 12/27/90, effective 1/31/91.]

WAC 246-03-070 Threshold determination process. In making a threshold determination, the responsible official shall follow the process outlined in WAC 197-11-330 through 197-11-390.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-070, filed 12/27/90, effective 1/31/91.]

WAC 246-03-080 Adjudicative proceeding. Any person has the right to an adjudicative proceeding to contest the department's final threshold determination that an EIS is or is not necessary and/or the sufficiency of the final EIS. The proceeding is governed by the Administrative Procedure Act (chapter 34.05 RCW), the rules in this chapter, and by chapter 246-08 WAC. If any provision in this chapter conflicts with chapter 246-08 WAC, the provision in this chapter governs.

(1) A person contesting a department's decision shall within twenty-eight days of the department's official notice of issuance of a final threshold determination or final EIS:

(a) File a written application for an adjudicative proceeding by a method showing proof of receipt by the department of health; and

(b) Include in or with the application:

(i) A specific statement of the issue or issues and law involved; and

(ii) The grounds for contesting the department decision.

(2) The initial order should be made within sixty days of the department's receipt of the application. When a party files a petition for administrative review, the review order should be made within sixty days of the department's receipt of the petition. The time to enter an order is extended by as many days as the proceeding is continued on motion by any party.

(3)(a) If the adjudicative order is that an EIS should be filed, the presiding officer or reviewing officer shall remand the matter to the department of health to file an EIS.

(b) If the adjudicative order is that the final EIS is not sufficient, the presiding officer or reviewing officer shall remand the matter to the department of health to correct the insufficiency.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-080, filed 12/27/90, effective 1/31/91.]

WAC 246-03-090 Scoping. When the department receives a scoping notice from a lead agency, the department shall submit any comments to the lead agency within twenty-one days from the date of issuance of the determination of significance. When the department is lead agency the steps in WAC 197-11-408 and 197-11-410 shall be followed.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-090, filed 12/27/90, effective 1/31/91.]

WAC 246-03-100 Issuance of draft EIS. When the department is lead agency, it shall issue the draft EIS in accordance with WAC 197-11-455.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-100, filed 12/27/90, effective 1/31/91.]

WAC 246-03-110 Policies and procedures for conditioning or denying permits or other approvals. (1) The policies and goals in this section are supplementary to existing authorities of the department.

(2) It is the policy of the department to avoid or mitigate adverse environmental impacts which may result from the department's decisions.

(3) The department shall use all practical means, consistent with other essential considerations of state policy, to improve and coordinate plans, functions, programs, and resources to the end that the state and its citizens may:

(a) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(b) Assure for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

(c) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(d) Preserve important historic, cultural, and natural aspects of our national heritage;

(e) Maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(f) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(g) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(4) The department recognizes that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

(5) The department shall ensure that presently unquantified environmental amenities and values will be given appropriate consideration in decision-making along with economic and technical considerations.

(6)(a) When the environmental document for a proposal shows it will cause significant adverse impacts, the responsible official shall consider whether:

(i) The environmental document identified mitigation measures that are reasonable and capable of being accomplished;

(ii) Other local, state, or federal requirements and enforcement would mitigate the significant adverse environmental impacts; and

(iii) Reasonable mitigation measures are sufficient to mitigate the significant adverse impacts.

(b) The responsible official may:

(i) Condition the approval for a proposal if mitigation measures are reasonable and capable of being accomplished and the proposal is inconsistent with the policies in this section; or

(ii) Deny the permit or approval for a proposal if reasonable mitigation measures are insufficient to mitigate significant adverse environmental impacts and the proposal is inconsistent with the policies in this section.

(c) The procedures in WAC 197-11-660 shall also be followed when conditioning or denying permits or other approvals.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-110, filed 12/27/90, effective 1/31/91.]

WAC 246-03-120 Public hearings. A public hearing on the environmental impact of a proposal shall be held as specified in WAC 197-11-535.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-120, filed 12/27/90, effective 1/31/91.]

WAC 246-03-130 Responsibilities of the department as a consulted agency. Other lead agencies may request the department for consultation during the SEPA process. The department shall then provide consultation in accordance with the requirements of WAC 197-11-502, 197-11-545 and 197-11-570.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-130, filed 12/27/90, effective 1/31/91.]

WAC 246-03-140 SEPA committee. (1) There is hereby created a SEPA committee to oversee the department's SEPA activities.

(2) The SEPA committee shall be composed of:

(a) One representative from the division of drinking water, environmental health programs;

(b) One representative from the facility licensing and certification section;

(c) One capital programs representative from the comptroller's office, management services division; and

(d) One representative from the division of radiation protection, environmental health programs.

(3) A representative from the office of the attorney general will provide legal support to the committee.

(4) The SEPA committee shall:

(a) Oversee the department's SEPA activities to ensure compliance with these agency guidelines, the state SEPA guidelines, and the policies and goals set forth in the State Environmental Policy Act;

(b) Oversee the future revision of these agency guidelines so as to reflect:

(i) Future amendment of SEPA or the state SEPA guidelines;

(ii) The creation of new department programs.

(c) Designate the responsible official for any major action for which the department is lead agency when such designation has not occurred elsewhere in these agency guidelines.

[Statutory Authority: RCW 43.21C.120. 92-02-018 (Order 224), § 246-03-140, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-140, filed 12/27/90, effective 1/31/91.]

WAC 246-03-150 SEPA public information. (1)

When the department is lead agency, the responsible official shall retain SEPA documents required by this chapter and shall make them available to the public in accordance with chapter 42.17 RCW.

(2) When the department is lead agency, the responsible official shall transmit copies of the following documents to the department of ecology headquarters office in Olympia:

(a) All draft and final EISs. (See WAC 197-11-455 and 197-11-460.)

(b) All determinations of nonsignificance (see WAC 197-11-340).

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-150, filed 12/27/90, effective 1/31/91.]

WAC 246-03-160 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-03-160, filed 12/27/90, effective 1/31/91.]

Chapter 246-08 WAC

PRACTICE AND PROCEDURE

WAC

ADJUDICATIVE PROCEEDINGS

246-08-101

Declaratory orders—Forms, content, and filing.

246-08-102

Declaratory orders—Procedural rights of persons in relation to petition.

246-08-103

Declaratory orders—Disposition of petition.

246-08-106

Updating mailing lists.

ADMINISTRATIVE PROCEDURES

246-08-390 Acquisition, retention and security of health care information.

POLICIES

246-08-400 How much can a medical provider charge for searching and duplicating medical records?
 246-08-420 Public records—Access and exemptions.
 246-08-440 Protection of public records.
 246-08-450 Final orders, declaratory orders, interpretive statements and policy statements—Indexes.
 246-08-520 Equal opportunity/affirmative action.
 246-08-560 Fees—Payment—Refunds.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-08-001 Application of chapter 246-08 WAC. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-001, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-410, filed 2/28/90, effective 3/1/90; Regulation 08.410, effective 3/11/60.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-020 Application for an adjudicative proceeding. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-413, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-030 Administrative law judge—Authority—Application of law—Assignment—Disqualification. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-425, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-040 Representation. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-428, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-050 Prehearing conference. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-431, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-060 Notice of hearing. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-434, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-070 Filing and service of papers. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-070, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-437, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-080 Vacating an order of dismissal for reason of default or withdrawal. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-080, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-

08-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-440, filed 2/28/90, effective 3/1/90; Regulation 08.440, effective 3/11/60.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-090 Subpoenas. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-446, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-100 Teleconference hearing. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-100, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-449, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-104 Petition for rule making—Form, content, and filing. [Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-08-104, filed 6/3/93, effective 7/4/93.] Repealed by 96-19-041, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.70.040.

246-08-105 Petition for rule making—Consideration and disposition. [Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-08-105, filed 6/3/93, effective 7/4/93.] Repealed by 96-19-041, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.70.040.

246-08-110 Rules of evidence. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-452, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-120 Contents of orders. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-461, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-130 Petition for review—Response to petition—Disqualification of review judge. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-130, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-464, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-140 Reconsideration. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-140, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-470, filed 2/28/90, effective 3/1/90; Regulation 08.470, effective 3/11/60.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-150 Adjudicative proceedings—Notice to limited-English-speaking parties. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-515, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-160 Interpreters. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-525, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

246-08-170 Group hearing. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-170, filed 12/27/90, effective 1/31/91. Statutory Authority:

- RCW 34.05.220. 90-06-018 (Order 038), § 248-08-535, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-180 Continuance. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-545, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-190 Computation of time. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-565, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-200 Judicial review of final adjudicative order. [Statutory Authority: RCW 34.05.220. 92-02-018 (Order 224), § 246-08-200, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-08-575, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-210 Variances, waivers, and exemptions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-210, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW. 90-01-134 (Order 016), § 248-08-596, filed 12/20/89, effective 1/20/90. Statutory Authority: RCW 43.20.050. 85-15-063 (Order 289), § 248-08-596, filed 7/18/85; 84-16-031 (Order 272), § 248-08-596, filed 7/25/84. Formerly WAC 248-08-595.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-320 Delegation of authority by secretary. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-320, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-340, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-330 Declaratory orders—Forms, content, and filing. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-330, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-350, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-340 Declaratory orders—Procedural rights of persons in relation to petition. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-340, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-360, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-350 Declaratory orders—Disposition of petition. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-350, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-370, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-360 Petition for rule making—Form, content, and filing. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-360, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-400, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.
- 246-08-370 Petition for rule making—Consideration and disposition. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-370, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-410, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005

246-08-380

(Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

Updating mailing lists. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-380, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.05.220. 90-06-018 (Order 038), § 248-320-500, filed 2/28/90, effective 3/1/90.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

ADJUDICATIVE PROCEEDINGS

WAC 246-08-101 Declaratory orders—Forms, content, and filing. A petition for a declaratory order shall generally adhere to the following form:

(1) At the top of the page shall appear the wording "Before the Washington state department of health." On the left side of the page below the foregoing the following caption shall be set out: "In the matter of the petition of (name of petitioning party) for a declaratory order." Opposite the foregoing caption shall appear the word "petition."

(2) The body of the petition shall be set out in numbered paragraphs. The first paragraph shall state the name and address of the petitioning party. The second paragraph shall state all rules or statutes that may be brought into issue by the petition. Succeeding paragraphs shall set out the statement of facts relied upon in form similar to that applicable to complaints in civil actions before the superior courts of this state. The concluding paragraphs shall contain the prayer of the petitioner. The petition shall be subscribed and verified in the manner prescribed for verification of complaints in the superior courts of this state.

(3) The original and two legible copies shall be filed with the appropriate board having jurisdiction in relation to a profession as provided in RCW 18.130.040 (2)(b). The original and two legible copies shall be filed with the Department of Health, Office of Professional Standards, PO Box 47872, Olympia, WA 98504-7872 if the secretary of the department of health has jurisdiction in relation to a profession or program as provided under RCW 18.130.040 (2)(a) and 43.70.020 through 43.70.040 respectively. Petitions shall be on white paper, 8 1/2" x 11" in size.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-08-101, filed 6/3/93, effective 7/4/93.]

WAC 246-08-102 Declaratory orders—Procedural rights of persons in relation to petition. If a petition for a declaratory order is set for specified proceedings under RCW 34.05.240 (5)(b), the department shall give not less than seven days advance written notice of the proceedings to the petitioner and all persons described under RCW 34.05.-240(3). The notice shall contain the time, date, place, and nature of the proceedings and shall describe how interested persons may participate in the proceeding.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-08-102, filed 6/3/93, effective 7/4/93.]

WAC 246-08-103 Declaratory orders—Disposition of petition. A declaratory order entered by the department or a decision declining to enter a declaratory order shall be in writing and shall be served upon the petitioner and all other persons described under RCW 34.05.240(3).

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-08-103, filed 6/3/93, effective 7/4/93.]

WAC 246-08-106 Updating mailing lists. (1) Periodically, the department may cause the following notice, or a notice substantially similar, to be mailed: "In order to maintain as current a mailing list as possible, and to eliminate mailing notices to those who no longer have need for such notices, the department will discontinue use of its old mailing lists, effective (date to be specified). If you wish to continue receiving copies of notices of intention to adopt, amend, or repeal rules after that date, please fill out the attached form and return it to the department at the address indicated on the form. If you do not return the form indicating your desire to continue to receive notices to adopt, amend, or repeal rules, your name or the names of your organization will be removed from the mailing lists."

(2) The notice regarding updating of mailing lists is to be mailed by first-class mail.

(3) The form to be filled out by those persons or organizations wishing to continue to receive department notices to adopt, amend, or repeal rules shall specify interest areas covered by these notices, thereby enabling those on mailing lists to limit correspondence received.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-08-106, filed 6/3/93, effective 7/4/93.]

ADMINISTRATIVE PROCEDURES

WAC 246-08-390 Acquisition, retention and security of health care information. This section sets forth the process by which the department of health or disciplining authority obtains and protects health care information under RCW 70.02.050. This section does not apply to health care information obtained by the department through other sources.

(1) Acquisition.

(a) The department shall request health care information in writing.

(b) Health care providers shall provide the requested information pursuant to RCW 70.02.050.

(2) Retention. The department shall maintain health care information obtained under this section as long as necessary to perform agency functions.

(3) Security. The department shall secure the records and protect confidentiality.

(a) The manager of the program within the department that requested the records shall act as the custodian of records, and shall provide access to the information only as necessary to perform agency responsibilities.

(b) The custodian shall monitor the location and security of the information.

(4) The department shall not make health care information obtained under RCW 70.02.050 available for public inspection and copying except as may be required by chapter 42.17 RCW. No health care information containing patient identifying data shall be made available for public inspection and copying under chapter 42.17 RCW. Health care information obtained under this section may be released to public agencies or entities as required by law or upon agreement by

the agency or entity that the health care information will be used only for authorized statutory purposes and will not be disclosed further.

[Statutory Authority: RCW 70.02.050(3). 92-07-080 (Order 253), § 246-08-390, filed 3/17/92, effective 4/17/92.]

POLICIES

WAC 246-08-400 How much can a medical provider charge for searching and duplicating medical records? RCW 70.02.010(12) allows medical providers to charge fees for searching and duplicating medical records. The fees a provider may charge cannot exceed the fees listed below:

(1) Copying charge per page:

(a) No more than eighty-three cents per page for the first thirty pages;

(b) No more than sixty-three cents per page for all other pages.

(2) Additional charges:

(a) The provider can charge a nineteen dollar clerical fee for searching and handling records;

(b) If the provider personally edits confidential information from the record, as required by statute, the provider can charge the usual fee for a basic office visit.

(3) This section is effective July 1, 2001, through June 30, 2003.

[Statutory Authority: RCW 70.02.010 and 43.70.040. 01-16-009, § 246-08-400, filed 7/19/01, effective 8/19/01; 99-13-083, § 246-08-400, filed 6/14/99, effective 7/15/99. Statutory Authority: RCW 70.02.010(12) and 43.70.040. 97-12-087, § 246-08-400, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040 and 70.02.101(12). 95-20-080, § 246-08-400, filed 10/4/95, effective 11/4/95.]

WAC 246-08-420 Public records—Access and exemptions. (1) Public records shall be available for inspection and copying during the department's normal business hours.

(2) The location of specific public records may be obtained by contacting the program where the records are maintained or the rules coordinator in the management services division.

(3) Requests for copies of public records shall be in writing and include:

(a) The name and address of the person requesting the record;

(b) A detailed description of the requested material; and

(c) If a list of names of individuals is being requested, an explanation of the purpose for which the request is made.

(4) No fee shall be charged for the inspection of public records, however the department may charge for reimbursement of the costs incurred by providing copies.

(5) The department reserves the right to determine that a public record is exempt from public disclosure under the provisions of chapter 42.17 RCW.

(6) The department reserves the right to delete identifying details when disclosing public records if there is reason to believe that disclosure of such details would be an invasion of personal privacy.

(7) The department, when denying a request for a public record, shall provide a statement of the specific exemption

which authorizes the withholding of the record and a brief explanation of how the exemption applies to the record withheld.

(8) Upon receipt of such denial, the requesting party may seek review of the decision by letter addressed to the deputy secretary, 1112 S.E. Quince Street, P.O. Box 47890, Olympia, WA 98504-7890.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-08-420, filed 3/24/93, effective 4/24/93.]

WAC 246-08-440 Protection of public records.

Access to the record storage areas shall be restricted to insure that essential functions of the agency are carried out and public records are not damaged, altered, disorganized, or lost. Inspection shall be in the presence of an authorized department employee. Inspection shall be denied and the records withdrawn if the individual inspecting the records is doing so in a manner likely to damage, alter, or substantially disorganize them; or attempts to remove them from the prescribed location; or is excessively interfering or will unduly interfere with other essential functions of the department.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-08-440, filed 3/24/93, effective 4/24/93.]

WAC 246-08-450 Final orders, declaratory orders, interpretive statements and policy statements—Indexes.

(1) In accordance with RCW 42.17.260, the department shall index:

(a) Final orders that are issued in adjudicative proceedings as defined in RCW 34.05.010(1) and contain an analysis or decision of substantial importance to the department in carrying out its duties;

(b) Declaratory orders that contain an analysis or decision of substantial importance to the department in carrying out its duties;

(c) Interpretive statements as defined in RCW 34.05.-010(8); and

(d) Policy statements as defined in RCW 34.05.010(14).

(2) The department shall maintain indexes of:

(a) Final orders meeting the criteria in subsection (1)(a) of this section, issued by the department and the disciplining authorities identified in RCW 18.130.040;

(b) Declaratory orders meeting the criteria in subsection (1)(b) of this section issued by the department and the state board of health; and

(c) Interpretive and policy statements issued by the department and state board of health.

(3) The indexes shall, at a minimum, contain the case or document number; type of document; name of parties, if applicable, unless such names are exempt from public disclosure; brief description of subject, program; pertinent legal citation; and location of the document.

(4) Any person may nominate a final adjudicative order or declaratory order to be evaluated for indexing by completing an Order Index Nomination Request Form which can be obtained from and returned to the Office of Professional Standards, PO Box 47872, Olympia, WA 98504-7872, along with a copy of the nominated order. The department shall make a final decision as to whether to index the nominated order, and that decision is not appealable.

(2003 Ed.)

(5) The department shall update the indexes on an ongoing basis and conduct an annual review to verify that the indexed documents continue to meet the criteria in subsection (1) of this section. The department may, at any time, delete a document from an index. Pursuant to RCW 42.17.260(6), a public record may not be cited in a proceeding if it has not been indexed.

(6) The indexes are public records and are available for public inspection and copying in accordance with WAC 246-08-420 and 246-08-440. Indexes are located as follows:

(a) The index of final adjudicative orders is located in the Office of Professional Standards, 2413 Pacific Avenue, Olympia, WA; and

(b) The index of declaratory orders, interpretive and policy statements issued by the department and the state board of health is located in the Office of the Secretary, 1112 Quince St. SE, Olympia, WA 98504.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-08-450, filed 1/31/94, effective 3/3/94. Statutory Authority: 43.70.050. 93-08-004 (Order 346), § 246-08-450, filed 3/24/93, effective 4/24/93.]

WAC 246-08-520 Equal opportunity/affirmative action. The department is firmly committed to equal opportunity and nondiscrimination both in the work force and in the delivery of services and makes every good faith effort to achieve the objectives of the affirmative action plan.

(1) **Employment** - The department recruits, hires, develops, and promotes persons in all job classifications without regard to race, creed, color, sex, age, national origin, marital status, or presence of a mental, physical, or sensory handicap. The department seeks to maintain a working environment free of harassment or intimidation, and to reasonably accommodate persons of disability.

(2) **Affirmative action** - The department strives to correct deficiencies regarding the utilization of protected groups, consistent with WAC 356-05-327, according to the timetables set forth in the department's affirmative action plan.

(3) **Services** - The department provides services, programs, and lets contracts in a fair and impartial manner. No person shall, on the grounds of sex, race, creed, color, age, national origin, marital status, or handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity administered or supervised by the department as required by the federal government as a prerequisite for fiscal grants-in-aid (Sec. 601, Civil Rights Act of 1964; 78 Stat. 252; 42 U.S.C. 2000d) and chapter 49.60 RCW.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-08-520, filed 3/24/93, effective 4/24/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-520, filed 12/27/90, effective 1/31/91; Order 18, § 248-10-010, filed 2/11/69.]

WAC 246-08-560 Fees—Payment—Refunds. (1) Fees are due with applications for initial licensing and renewals. The department will not proceed on applications until required fees are paid.

(2) Fee payments may be made in person or by mail. Payment shall be by check, draft, or money order made payable to the department of health.

[Title 246 WAC—p. 63]

(3) If a license is denied, revoked, or suspended, fees shall not be refunded.

(4) Application for license after denial or revocation shall include fees as provided for in this title.

(5) Failure to pay fees when due shall invalidate the license/certification/registration and all privileges granted by the license/certification/registration. A late penalty fee shall be remitted in addition to the annual renewal fee.

(6) The department of health shall refund fees it collects that are paid in excess of the stated fee, or paid erroneously.

(7) The payee shall submit to the department a cancelled check or a cash receipt as proof of payment when requesting a refund.

(8) The department shall make refunds of five dollars or less only upon written request within thirteen months from date of payment.

[Statutory Authority: RCW 43.70.050. 93-08-004 (Order 346), § 246-08-560, filed 3/24/93, effective 4/24/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-08-560, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.01.072. 90-08-003 (Order 044), § 246-09-060, filed 3/22/90, effective 4/22/90.]

Chapter 246-10 WAC ADMINISTRATIVE PROCEDURE—ADJUDICATIVE PROCEEDINGS

WAC

SECTION I PRELIMINARY MATTERS

246-10-101	Application of chapter.
246-10-102	Definitions.
246-10-103	Signature authority.
246-10-104	Appearance of parties.
246-10-105	Computation of time.
246-10-106	Notarization, certification, and authentication.
246-10-107	Persons who may request adjudicative proceedings.
246-10-108	Representation.
246-10-109	Service and filing.
246-10-110	Jurisdiction.
246-10-111	Telephone proceedings.
246-10-112	Hearing location.
246-10-113	Good faith requirement.
246-10-114	Public records.
246-10-115	Expenses and witness fees.
246-10-116	Immunity.
246-10-117	Official notice and agency expertise.
246-10-118	Sanctions.
246-10-119	Intervention.
246-10-120	Form of pleadings and orders.
246-10-121	Notice to limited-English-speaking parties.
246-10-122	Interpreters.
246-10-123	Subpoenas.
246-10-124	Preliminary requirements.

SECTION II INITIATING ACTIONS

246-10-201	Form and content of initiating documents.
246-10-202	Amendment of initiating documents.
246-10-203	Request for adjudicative proceeding.
246-10-204	Default.
246-10-205	Scheduling orders.

SECTION III EMERGENCY ADJUDICATIVE PROCEEDINGS

246-10-301	Conduct of emergency adjudicative proceedings.
246-10-302	Effect of summary action.
246-10-303	Form and content of summary actions.
246-10-304	Adjudicative proceedings upon summary action.
246-10-305	Opportunity for prompt adjudicative proceeding.
246-10-306	Proceedings prior to prompt adjudicative proceeding.

SECTION IV SETTLEMENT AND PREHEARING PROCEEDINGS

246-10-401	Settlement conference.
246-10-402	Discovery.
246-10-403	Motions.
246-10-404	Prehearing conference.
246-10-405	Protective orders.

SECTION V BRIEF ADJUDICATIVE PROCEEDINGS

246-10-501	Application of brief adjudicative proceedings.
246-10-502	Preliminary record in brief adjudicative proceedings.
246-10-503	Conduct of brief adjudicative proceedings.
246-10-504	Effectiveness of orders on brief adjudicative proceedings.
246-10-505	Agency record in brief proceedings.

SECTION VI HEARING

246-10-601	Notice of adjudicative proceeding.
246-10-602	Conduct of adjudicative proceeding.
246-10-603	Evidence.
246-10-604	Proposed order.
246-10-605	Issuance of final order.
246-10-606	Standard of proof.
246-10-607	Consolidated proceedings.
246-10-608	Initial order.

SECTION VII POSTHEARING PROCESS

246-10-701	Appeal from initial order.
246-10-702	Final orders.
246-10-703	Stay of final orders.
246-10-704	Reconsideration of final orders.
246-10-705	Agency record of adjudicative proceedings.
246-10-706	Judicial review.
246-10-707	Vacating an order for reason of default or withdrawal.

SECTION I PRELIMINARY MATTERS

WAC 246-10-101 Application of chapter. (1) This chapter shall apply to adjudicative proceedings authorized to be conducted under the authority of the department of health.

(2) This chapter applies to adjudicative proceedings begun on or after the effective date of this chapter in programs administered by the department of health. For purposes of this section, "begun" shall mean the receipt by the appropriate office of an application for an adjudicative proceeding. These rules shall be the exclusive rules governing adjudicative proceedings under the jurisdiction of the department.

(3) To the extent that these rules differ by inclusion, deletion, or content from the model rules adopted by the chief administrative law judge pursuant to RCW 34.05.250, this chapter shall prevail in order to provide a process consistent with the organization of the department.

(4) Where a provision of this chapter conflicts with another chapter of this title, the provision of this chapter shall prevail.

(5) Where a provision of this chapter conflicts with a provision of the Revised Code of Washington, the statute shall prevail.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-101, filed 6/3/93, effective 7/4/93.]

WAC 246-10-102 Definitions. As used in these rules of practice and procedure, the following terms shall have the meaning set forth in this section unless the context clearly

indicates otherwise. Other terms shall have their ordinary meaning unless defined elsewhere in this chapter.

"Adjudicative clerk office" shall mean the unit with responsibility for: Docketing; service of orders; and maintaining custody of the adjudicative proceeding record, whose address is:

Department of Health
Adjudicative Clerk Office
2413 Pacific Avenue
PO Box 47879
Olympia, WA 98504-7879

"Adjudicative proceeding" or "hearing" shall mean a proceeding required by statute or constitutional right and conducted under the rules of this chapter, which provides an opportunity to be heard by the department prior to the entry of a final order under this chapter.

"Brief adjudicative proceeding" shall mean an adjudicative proceeding or hearing, the scope or conduct of which is limited as provided in this chapter.

"Department" shall mean the Washington state department of health and, where appropriate, the secretary of the Washington state department of health or the secretary's designee.

"Docket" or "docketing" shall mean the list or calendar of causes set to be heard at a specified time, prepared by the adjudicative clerk office for the use of the department.

"Filing" shall mean receipt by the adjudicative clerk office.

"Initiating document" shall mean a written agency document which initiates action against a license holder or applicant for license or recipient of benefits and which creates the right to an adjudicative proceeding. It may be entitled a statement of charges, notice of intent to deny, order, or by any other designation indicating the action or proposed action to be taken.

"License" shall have the meaning set forth in RCW 34.05.010, and includes any license, certification, registration, permit, approval, or any similar form of authorization required by law to be obtained from the department.

"Office of professional standards" shall mean the unit responsible for conducting adjudicative proceedings.

"Presiding officer" shall mean the person who is assigned to conduct an adjudicative proceeding. The presiding officer may be an employee of the department who is authorized to issue a final decision as designee of the secretary, or an administrative law judge employed by the office of administrative hearings.

"Presiding officer for brief adjudicative proceedings" shall mean an employee of the department who is authorized to conduct brief adjudicative proceedings.

"Program" shall mean the administrative unit within the department responsible for implementation of a particular statute or rule.

"Prompt adjudicative proceeding" or "prompt hearing" shall mean a hearing conducted at the request of the license holder or applicant for license following summary action taken in accord with this chapter against that license holder or applicant.

(2003 Ed.)

"Protective order" shall mean an order issued under this chapter which limits the use of, access to, or disclosure of information or evidence.

"Recipient of benefits" shall mean an individual who has qualified for benefits administered by the department.

"Respondent" shall mean a person eligible to request an adjudicative proceeding in a program under the jurisdiction of the department who is named in an initiating document.

"Secretary" shall mean the secretary of the department of health or his/her designee.

"Summary action" shall mean an agency action to address an immediate danger to the public health, safety, or welfare and shall include, but not be limited to, a cease and desist order, an order of summary suspension, and an order of summary restriction of a license.

[Statutory Authority: RCW 18.155.040, 97-12-089, § 246-10-102, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040, 94-04-079, § 246-10-102, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-102, filed 6/3/93, effective 7/4/93.]

WAC 246-10-103 Signature authority. (1) A person designated by the program shall sign all initiating documents issued under this chapter.

(2) The presiding officer shall sign all orders issued under this chapter.

(3) Authority to sign shall be indicated by designation of the title of the person signing and shall not require any other affirmation, affidavit, or allegation.

[Statutory Authority: RCW 43.70.040, 94-04-079, § 246-10-103, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-103, filed 6/3/93, effective 7/4/93.]

WAC 246-10-104 Appearance of parties. If a respondent requests an adjudicative proceeding to contest the action, that party shall appear at all stages of the proceeding except as otherwise provided in this section.

(1) If the respondent is represented as provided in this chapter, the respondent shall appear personally at the hearing and at any scheduled settlement conference but need not appear at the prehearing conference or at presentation of motions.

(2) Parties may be represented by counsel at all proceedings.

(3) The respondent may appear by telephone at any portion of the proceedings conducted by telephone, in the discretion of the presiding officer following reasonable advance notice to the presiding officer and to the opposing party.

(4) The requirement of personal appearance may be waived for good cause in the discretion of the presiding officer.

(5) Failure to appear as provided in this chapter shall be grounds for taking final action by default.

[Statutory Authority: RCW 43.70.040, 93-13-005 (Order 369), § 246-10-104, filed 6/3/93, effective 7/4/93.]

WAC 246-10-105 Computation of time. (1) When computing a period of time prescribed or allowed by an applicable statute or rule, the day of the act, event, or default from which the designated period of time begins to run shall not be included.

(2) The last day of the computed period shall be included unless the last day is a Saturday, Sunday, or legal holiday.

(3) When the last day is a Saturday, Sunday, or legal holiday, the period shall run until the end of the next day which is not a Saturday, Sunday, or legal holiday.

(4) When the period of time prescribed or allowed is seven days or less, any intermediate Saturday, Sunday, and legal holiday shall be excluded from the computation.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-105, filed 6/3/93, effective 7/4/93.]

WAC 246-10-106 Notarization, certification, and authentication. (1) A person's sworn written statement, declaration, verification, certificate, oath, or affidavit may be authenticated by an unsworn written statement which is executed in substantially the following form:

I certify (or declare) under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

(Date and Place)

(Signature)

(2) Documents or records may be authenticated by a certification, as provided in subsection (1) of this section, from the custodian of the records or other qualified person that the documents or records are what they purport to be.

(3) Signature of any attorney shall be accompanied by and authenticated by that attorney's Washington State Bar Association number.

(4) Documents prepared and submitted by a party who is not represented by an attorney shall be signed and dated by that party and shall include that party's current address.

(5) Signature by a party or an attorney on a document shall constitute a certificate by the party or attorney that he/she has read the document, believes there are grounds to support it, and has not submitted the document for delay, harassment, or needless increase in the cost of a proceeding.

(6) Compliance with certification requirements of subsections (1) and (2) of this section creates a rebuttable presumption that a document is authentic.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-106, filed 6/3/93, effective 7/4/93.]

WAC 246-10-107 Persons who may request adjudicative proceedings. The persons indicated may request an adjudicative proceeding under this chapter.

(1)(a) With respect to the denial of applications made under WAC 246-290-100, 246-290-110, 246-290-120, 246-290-130, 246-290-140, 246-291-100, 246-291-110, 246-291-120, 246-291-130, 246-291-140, and 246-295-040, the denied applicant may request an adjudicative proceeding.

(b) A person whose application for the approval of a new public water system is denied under WAC 246-293-190, a purveyor whose license is adversely affected by a departmental decision under WAC 246-293-190 or the county legislative authority having jurisdiction in the area affected by the decision may request an adjudicative proceeding under this chapter.

[Title 246 WAC—p. 66]

(c) A purveyor affected by the decision of the department under WAC 246-293-430 or the county legislative authority having jurisdiction in the area may request an adjudicative proceeding with respect to a decision made under WAC 246-293-430.

(d) A person upon whom a civil penalty is imposed under RCW 70.119A.040 may request an adjudicative proceeding.

(2) With respect to all other matters involving the issuance, denial of, or adverse action against, a license, the applicant or licensee may request an adjudicative proceeding.

(3) With respect to matters involving receipt of benefits or application therefor, the recipient of or applicant for the benefits may request an adjudicative proceeding.

(4) With respect to an application for approval of a school or curriculum, the person or authority that applied for such approval may request an adjudicative proceeding.

(5) With respect to the department's final threshold determination that an environmental impact statement (EIS) is or is not necessary and with respect to the adequacy of a final EIS, any person may request an adjudicative proceeding who:

(a) Is seeking to protect an interest within the zone of interests to be protected or regulated by the statute or constitutional guarantee in question; and

(b) Will be specifically and perceptibly harmed by the proposed action.

(6) Any application for an adjudicative proceeding that on its face demonstrates that the person making the application does not have standing under this rule may be summarily dismissed by entry of a decision pursuant to RCW 34.05.416. A motion to dismiss a matter for lack of standing may be made at any time prior to entry of the final order.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-10-107, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-107, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-107, filed 6/3/93, effective 7/4/93.]

WAC 246-10-108 Representation. (1) Persons requesting an adjudicative proceeding may be represented subject to the following conditions:

(a) A person requesting an adjudicative proceeding may represent himself/herself or may be represented by an attorney who has complied with the admission to practice rules of the supreme court of the state of Washington;

(b) Every attorney representing a person requesting an adjudicative proceeding shall file a notice of appearance with the adjudicative clerk office upon commencing representation, and shall file a notice of withdrawal of counsel with the adjudicative clerk office upon terminating representation.

(c) No person requesting an adjudicative proceeding may be represented in an adjudicative proceeding by an employee of the department.

(2) No current or former employee of the department may appear as an expert, character witness, or representative of any party other than the state of Washington if he/she took an active part in investigating or evaluating the case or represented the agency in the matter, unless written permission of the secretary is granted. No current or former member of the attorney general's office staff who participated personally

(2003 Ed.)

and substantially in investigating or evaluating the matter at issue while so employed may represent a party or otherwise participate in a related proceeding without first having obtained the written consent of the attorney general's office.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-108, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-108, filed 6/3/93, effective 7/4/93.]

WAC 246-10-109 Service and filing. (1) A party filing a pleading, brief, or paper other than an initiating document or application for an adjudicative proceeding as required or permitted by these rules, shall serve a copy of the paper upon the opposing party or any designated representative of the opposing party prior to or simultaneous with filing.

(2) Unless otherwise provided by law, filing and service shall be made by personal service; by first class, registered, or certified mail; or by electronic telefacsimile transmission (FAX) where copies are mailed simultaneously.

(3) Filing shall be complete upon actual receipt during normal business hours at the adjudicative clerk office.

(4) Service shall be complete when personal service is made; or mail is properly stamped, addressed, and deposited in the United States mail; or FAX transmission is completed and copies are deposited in the United States mail properly stamped and addressed.

(5) Proof of service shall consist of filing as required by these rules, together with one of the following:

(a) An acknowledgement of service;

(b) A certificate of service including the date the papers were served, the parties upon whom served, the signature of the serving party, and a statement that service was completed by:

(i) Personal service; or

(ii) Mailing in the United States mail a copy properly addressed with postage and fees prepaid to each party and each designated representative.

(6) For the purpose of service on a licensee or a person requesting an adjudicative proceeding, service shall be made at the last known address provided to the department in accordance with WAC 246-01-100, unless the program has actual knowledge of a different correct address for the person being served.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-109, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-109, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-109, filed 6/3/93, effective 7/4/93.]

WAC 246-10-110 Jurisdiction. (1) The department has jurisdiction over all licenses issued by the department and over all holders of and applicants for licenses. Such jurisdiction is retained even if an applicant requests to withdraw the application, or a licensee surrenders or fails to renew a license.

(2) The department has jurisdiction over unlicensed practice of any activity for which a license is required unless otherwise prohibited by law.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-110, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-110, filed 6/3/93, effective 7/4/93.]

(2003 Ed.)

WAC 246-10-111 Telephone proceedings. (1) The presiding officer may conduct all or part of the proceedings or permit a party or witness to appear by telephone or other electronic means if each participant in the proceedings has an opportunity to participate in, hear, and, if technically and economically feasible, see the entire proceeding while it is taking place. Cost of such appearance may be assessed to the party so appearing or on whose behalf the witness appears.

(2) If all or part of the proceedings is conducted as provided in subsection (1) of this section, the parties shall file and serve copies of all documentary evidence no less than three days prior to the proceeding. The presiding officer may, for good cause, allow exceptions to this requirement.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-111, filed 6/3/93, effective 7/4/93.]

WAC 246-10-112 Hearing location. The presiding officer shall designate sites for the conduct of proceedings taking into account accessibility, efficiency, and economy.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-112, filed 6/3/93, effective 7/4/93.]

WAC 246-10-113 Good faith requirement. Good faith shall be the standard for compliance with these rules. Failure to make a good faith effort to comply with these rules shall be grounds for sanctions as provided in this chapter.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-113, filed 6/3/93, effective 7/4/93.]

WAC 246-10-114 Public records. (1) All papers, exhibits, transcripts, and other materials required by or submitted in accordance with this chapter shall be considered public records.

(2) Release of information upon request for public records shall be subject to the following limitations:

(a) Release of health care information shall comply with chapter 70.02 RCW and rules promulgated thereunder;

(b) Protective orders issued pursuant to WAC 246-10-405 shall prevail; and

(c) Chapter 42.17 RCW shall govern the release of records.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-114, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-114, filed 6/3/93, effective 7/4/93.]

WAC 246-10-115 Expenses and witness fees. (1) Fees and expenses shall be paid at the following rates to witnesses appearing under subpoena by the party requesting the appearance:

(a) Fees shall be paid at the daily rate established for jurors in district court of Thurston County; and

(b) Expenses shall be paid at the rate established for employees of the state of Washington, or as otherwise required by law.

(2) Fees for an expert witness shall be negotiated by and paid by the party requesting services of the expert.

(3) All expenses incurred in connection with proceedings under this chapter shall be paid by the party incurring the expense.

(4) The department shall pay expenses associated with:

- (a) The facility in which proceedings are conducted; and
- (b) Recording of the proceedings.

(5) Expenses related to preparation and distribution of the transcript of proceedings shall be paid by the party filing a motion or request for review of an initial order or petition for reconsideration, appealing a final order, or otherwise requesting the transcript.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-115, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-115, filed 6/3/93, effective 7/4/93.]

WAC 246-10-116 Immunity. The legislature has determined that persons who file complaints with or provide information to the department regarding health care practitioners licensed by the department are immune from civil liability, provided that such persons have acted in good faith. RCW 4.24.240 through 4.24.260, 18.130.170, 18.130.180, and 18.130.300 set forth the provisions under which immunity is granted.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-116, filed 6/3/93, effective 7/4/93.]

WAC 246-10-117 Official notice and agency expertise. (1) Official notice may be taken as provided in RCW 34.05.452(5).

(2) The department, through its designated presiding officer, may use its expertise and specialized knowledge to evaluate and draw inferences from the evidence presented to it.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-117, filed 6/3/93, effective 7/4/93.]

WAC 246-10-118 Sanctions. (1) Orders may include sanctions against either party.

(2) Grounds for sanctions may include:

- (a) Failure to comply with these rules or orders of the presiding officer; and
 - (b) Willful interference with the progress of proceedings.
- (3) Sanctions may include:
- (a) Dismissal of the matter;
 - (b) Proceeding in default; and
 - (c) Other sanctions as appropriate.

(4) The order shall state the grounds upon which any sanctions are imposed.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-118, filed 6/3/93, effective 7/4/93.]

WAC 246-10-119 Intervention. (1) The presiding officer may grant a petition for intervention pursuant to RCW 34.05.443.

(2) A request to intervene shall be handled as a pre-hearing motion and shall be subject to the dates contained in the scheduling order. Within the sound exercise of discretion, the presiding officer may allow intervention if:

(a) The intervenor is not a party to the matter but has a substantial interest in outcome of the matter and the interest of the intervenor is not adequately represented by a party, or other good cause exists; and

(b) Any representative of the intervenor meets the requirements of WAC 246-10-108.

[Title 246 WAC—p. 68]

(3) A person shall not be allowed to intervene if that person had notice of the agency's decision and, upon timely application, would have been able to appear as a party in the matter in which intervention is sought, but failed to make such timely application.

(4) If intervention is granted, the intervenor shall be subject to these rules on the same basis as the other parties to the proceeding, unless otherwise limited in the order granting intervention.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-119, filed 6/3/93, effective 7/4/93.]

WAC 246-10-120 Form of pleadings and orders. (1) Pleadings, orders, and other papers filed, served, or entered under this chapter shall be:

(a) Captioned with the name of the state of Washington, department of health and the title of the proceeding; and

(b) Signed by the person filing, serving, or entering the document. When that person is an attorney representing a party, the signature block shall include the attorney's Washington State Bar Association number.

(2) All orders shall comply with RCW 34.05.461 and the requirements of this chapter.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-120, filed 6/3/93, effective 7/4/93.]

WAC 246-10-121 Notice to limited-English-speaking parties. When the program or the adjudicative clerk office is notified or otherwise made aware that a limited-English-speaking person is a party in an adjudicative proceeding, all notices concerning the hearing, including notices of hearing, continuance, and dismissal, shall either be in the primary language of the party or shall include a notice in the primary language of the party which describes the significance of the notice and how the party may receive assistance in understanding and, if necessary, responding to the notice.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-121, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-121, filed 6/3/93, effective 7/4/93.]

WAC 246-10-122 Interpreters. (1) A "hearing impaired person" means a person who, because of a hearing impairment or speech defect, cannot readily understand or communicate in spoken language. A "hearing impaired person" includes a person who is deaf, deaf and blind, or hard of hearing.

(2) A "limited-English-speaking person" means a person who because of a non-English-speaking cultural background cannot readily speak or understand the English language.

(3) If a hearing impaired person or a limited-English-speaking person is involved in an adjudicative proceeding and a need for an interpreter is made known to the adjudicative clerk office, the presiding officer shall appoint an interpreter who is acceptable to the parties or, if the parties are unable to agree on an interpreter, the presiding officer shall select and appoint an interpreter.

(4) Before beginning to interpret, an interpreter shall take an oath or make affirmation that:

(a) A true interpretation shall be made to the impaired person of all the proceedings in a language or in a manner the impaired person understands; and

(b) The interpreter shall repeat the statements of the impaired person to the presiding officer, in the English language, to the best of the interpreter's skill and judgment.

(5) When an interpreter is used in a proceeding:

(a) The interpreter shall translate all statements made by other participants in the proceeding;

(b) The presiding officer shall ensure sufficient extra time is provided to permit translation; and

(c) The presiding officer shall ensure that the interpreter translates the entire proceeding to the hearing impaired person or limited-English-speaking person to the extent that the person has the same opportunity to understand the statements made as would a person not requiring an interpreter.

(6) An interpreter appointed under this section shall be entitled to a reasonable fee for services, including waiting time and reimbursement for actual necessary travel expenses. The program shall pay the interpreter fee and expenses incurred for interpreters for license holders, applicants, or recipients of benefits. The party on whose behalf a witness requiring an interpreter appears shall pay for interpreter services for that witness.

(7) All proceedings shall be conducted consistent with chapters 2.42 and 2.43 RCW.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-122, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-122, filed 6/3/93, effective 7/4/93.]

WAC 246-10-123 Subpoenas. (1) The presiding officer, the secretary or designee, and attorneys for parties may issue subpoenas to residents of the state of Washington, to license holders and applicants for license, and to other persons or entities subject to jurisdiction under RCW 4.28.185.

(2) The presiding officer shall issue subpoenas pursuant to RCW 34.05.446(1) for parties not represented by counsel upon request of the party and upon a showing of relevance and reasonable scope of the testimony or evidence sought. Requests for issuance of subpoenas must be made in writing to the presiding officer stating the relevance and the scope of testimony or evidence sought.

(3) The person on whose behalf the subpoena is issued shall pay any witness fees and expenses as provided in WAC 246-10-115 or costs for interpreters for such witnesses as provided in WAC 246-10-122.

(4) Attendance of persons subpoenaed and production of evidence may be required at any designated place in the state of Washington.

(5) Every subpoena shall:

(a) Comply with WAC 246-10-120;

(b) Identify the party causing issuance of the subpoena;

(c) State the title of the proceeding; and

(d) Command the person to whom the subpoena is directed to attend and give testimony and/or produce designated items under the person's control at a specified time and place.

(6) A subpoena may be served by any suitable person eighteen years of age or older by:

(a) Giving a copy to the person to whom the subpoena is addressed;

(b) Leaving a copy at the residence of the person to whom the subpoena is addressed with a person of suitable age and discretion;

(c) Sending a copy by mail to the current address on file with the department if the person is licensed by the department or has filed an application for a license with the department; or

(d) Sending a copy by certified mail with proof of receipt if the person is neither licensed by nor has applied for a license with the department.

(7) Proof of service may be made by:

(a) Affidavit of personal service;

(b) Certification by the person mailing the subpoena to a license holder or applicant; or

(c) Return or acknowledgment showing receipt by the person subpoenaed or his/her representative. Any person accepting certified or registered mail at the last known address of the person subpoenaed shall be considered an authorized representative.

(8) The presiding officer, upon motion made promptly and before the time specified for compliance in the subpoena, may:

(a) Quash or modify the subpoena if the subpoena is unreasonable or requires evidence not relevant to any matter at issue; or

(b) Condition denial of the motion upon just and reasonable conditions, including advancement of the reasonable cost by the person on whose behalf the subpoena is issued of producing the books, documents, or tangible things; or

(c) Issue a protective order under RCW 34.05.446.

(9) The department may seek enforcement of a subpoena under RCW 34.05.588(1) or proceed in default pursuant to WAC 246-10-204.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-123, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-123, filed 6/3/93, effective 7/4/93.]

WAC 246-10-124 Preliminary requirements. (1) An applicant for an initial license or renewal of an existing license shall not be entitled to an adjudicative proceeding unless the applicant has submitted:

(a) A completed initial application or renewal application, as appropriate; and

(b) All applicable application, examination, or renewal fees payable in connection with such application or license.

(2) An aggrieved applicant shall not be entitled to an adjudicative proceeding with respect to the denial of an application submitted under WAC 246-290-100, 246-290-110, 246-290-120, 246-290-130, 246-290-140, 246-291-100, 246-291-110, 246-291-120, 246-291-130, 246-291-140, or 246-295-040, unless the applicant has submitted to the district engineer or other departmental employee responsible for reviewing the submittal, a certification that, to the best of the applicant's knowledge and belief, the submittal is complete and demonstrates compliance with the state's drinking water regulations. Certification with respect to water system plans, project reports, construction documents and other submittals requiring preparational review by a licensed professional

engineer shall be provided on behalf of the applicant by the licensed professional engineer preparing or reviewing the submittal. Failure to comply with these preliminary requirements shall result in the denial of the application for adjudicative proceeding without further review.

(3) An affected party shall not be entitled to an adjudicative proceeding with respect to a decision made under WAC 246-293-190 unless:

(a) Except with respect to a county legislative authority, the applicant shall have complied with all preliminary requirements established under the coordinated water system plan approved by the county legislative authority and the department or, if the critical water supply service area's external boundaries have been approved but a coordinated water system plan has not been approved and adopted, then with any interim requirements imposed by the county legislative authority; and

(b) Within sixty days of the department's receipt of the request for an adjudicative proceeding, the applicant submits copies of the complete record of all proceedings conducted under the applicable coordinated water system plan or interim requirements. If such proceedings were taped or otherwise recorded, the record submitted to the department shall include a transcript of the hearing or hearings which shall be prepared and certified as correct by a registered professional court reporter.

(c) Failure to comply with the preliminary requirements outlined herein shall result in a denial of the hearing application without further review.

(4) WAC 246-293-430.

(a) An adjudicative proceeding shall not be conducted with respect to a departmental decision made under WAC 246-293-430 unless, within sixty days of the department's receipt of the request for an adjudicative proceeding, the applicant has, at his or her own expense, submitted a transcript of the hearing conducted under WAC 246-293-430 from tapes or other record of the hearing which the department shall make available for that purpose. The transcript shall be prepared and certified as correct by a registered professional court reporter. Failure to comply with preliminary requirements established under this section shall result in the dismissal of the hearing application without further review.

(b) If a request for an adjudicative proceeding has been timely filed under this section and a transcript of the record has been timely submitted, the department shall promptly provide the presiding officer with copies of all documents and exhibits admitted at the hearing conducted under WAC 246-293-430.

(c) The departmental employee responsible for the department's decision under WAC 246-293-430 shall provide a copy of his or her decision to the presiding officer and may submit documents or evidence not made part of the record at the hearing conducted under WAC 246-293-430. Copies of all such documents shall be provided to all other parties involved in the proceeding.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-10-124, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-124, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-124, filed 6/3/93, effective 7/4/93.]

SECTION II INITIATING ACTIONS

WAC 246-10-201 Form and content of initiating documents. (1) Initiating documents shall include a clear and concise statement of the:

(a) Identity and authority of the person issuing the document;

(b) Factual basis for the action or proposed action set forth in the document;

(c) Statutes and rules alleged to be at issue;

(d) Identity of the party against whom the action is taken or proposed to be taken;

(e) Action or proposed action or penalties, including the statutory or rule authority for those actions or penalties;

(f) Signature of the person issuing the document and the date signed; and

(g) Method by which an adjudicative proceeding may be requested.

(2) Initiating documents shall be accompanied by the following documents:

(a) Notice that the respondent may defend against the action or proposed action; and

(b) Form for requesting adjudicative proceeding.

(3) Initiating documents shall be served as described in WAC 246-10-109.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-201, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-201, filed 6/3/93, effective 7/4/93.]

WAC 246-10-202 Amendment of initiating documents. (1) Prior to the hearing date, initiating documents may be amended subject to the following conditions:

(a) Amended initiating documents shall meet the requirements of WAC 246-10-201(1);

(b) Amended initiating documents shall be accompanied by the documents described in WAC 246-10-201(2);

(c) Whenever amended initiating documents are issued, a new interval for response will begin, as described in WAC 246-10-203, unless the respondent requests the time periods set by the original initiating document; and

(d) Issuance of amended initiating documents ends all obligations of the parties under the prior initiating documents.

(2) On the hearing date, the initiating documents may be amended subject to the following conditions:

(a) The documents may be amended upon motion of the state;

(b) The documents may not be amended without the approval of the presiding officer; and

(c) Upon motion of a party or upon his/her own initiative, the presiding officer may grant a continuance on all or part of the matter if necessary to afford the respondent an opportunity to prepare a defense to the amended documents.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-202, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-202, filed 6/3/93, effective 7/4/93.]

WAC 246-10-203 Request for adjudicative proceeding. A respondent may respond to an initiating document by filing an application for an adjudicative proceeding or by waiving the opportunity for adjudicative proceeding.

(1) If the respondent wishes to file an application for an adjudicative proceeding:

(a) An application for adjudicative proceeding must be filed in accordance with the following time periods:

(i) For matters under chapter 18.130 RCW, the Uniform Disciplinary Act, within twenty days of service of the initiating documents unless an extension has been granted as provided in subsection (3) of this section; and

(ii) For all other matters in which the program proposes to deny, suspend, revoke or modify a license or proposes to impose a civil fine, within twenty-eight days of receipt of the initiating documents, unless otherwise provided by statute; and

(iii) For all other matters, within twenty days of service of the initiating documents, unless otherwise provided by statute.

(b) The application for adjudicative proceeding shall be made either on the Request for Adjudicative Proceeding Form accompanying the initiating documents or by a written document containing at least the following information:

(i) Name and address of the party requesting an adjudicative proceeding;

(ii) Name and address of the attorney representing the party, if any;

(iii) Identification of the portion or portions of the initiating documents contested;

(iv) Summary of the party's position on the portion or portions contested;

(v) Statement of the party's standing to request an adjudicative proceeding under WAC 246-10-107; and

(vi) For matters not under chapter 18.130 RCW and in which the department proposes to deny, suspend, revoke or modify a license or proposes to impose a civil fine, the application shall include a copy of the initiating document containing the adverse notice.

(c) By filing a request for adjudicative proceeding, the responding party agrees to appear personally at the adjudicative proceeding or, if otherwise approved by the presiding officer, by telephone, unless appearance is waived as authorized in WAC 246-10-104(4).

(d) The application for adjudicative proceeding shall contain a response to the initiating documents, indicating whether each charge is admitted, denied, or not contested, and responses shall be subject to the following conditions:

(i) Once admitted or not contested, an allegation may not be denied; and

(ii) An allegation denied or not contested may later be admitted.

(e) When an allegation is admitted or not contested, it shall be conclusively deemed to be true for all further proceedings. No proof of the allegation need be submitted.

(f) The application for adjudicative proceeding shall specify the representative, if any, designated pursuant to WAC 246-10-108 and any request for interpreter. The responding party shall amend the name of the representative

(2003 Ed.)

and need for interpreter immediately if circumstances change prior to the hearing.

(g) The application for adjudicative proceeding shall be filed at the adjudicative clerk office at the address specified in WAC 246-10-102.

(2) A respondent may waive an adjudicative proceeding and submit a written statement and other documents in defense or in mitigation of the charges. Such waiver and documents shall be filed:

(a) In accordance with the timelines in subsection (1)(a) of this section; and

(b) At the address indicated in subsection (1)(g) of this section.

(3) For matters under RCW 18.130.180, if the twenty-day limit for filing an application for adjudicative proceeding results in a hardship to the respondent, the respondent may request an extension of not more than sixty days upon a showing of good cause.

(a) The request for extension shall be filed within the twenty day limit and shall include:

(i) The reason for the request and the number of days for which the extension is requested; and

(ii) Documentation of the circumstances creating the hardship.

(b) The request shall be granted for a period not to exceed sixty days upon showing of:

(i) Illness of the respondent; or

(ii) Absence of the respondent from the county of residence or employment; or

(iii) Emergency in the respondent's family; or

(iv) Other good cause as determined by the presiding officer.

(c) If a request for extension is denied, the respondent shall have ten days from service of the order denying the extension or twenty days from service of the initiating documents, whichever is longer, to file an application for adjudicative proceeding.

[Statutory Authority: RCW 18.155.040, 97-12-089, § 246-10-203, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040, 94-04-079, § 246-10-203, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-203, filed 6/3/93, effective 7/4/93.]

WAC 246-10-204 Default. (1) If a party fails to respond to initiating documents according to WAC 246-10-203, that party will be deemed to have waived the right to a hearing, and the secretary shall enter a final order without further contact with that party.

(2) If a party requests an adjudicative proceeding but fails to appear, without leave to do so, at a scheduled prehearing conference, the presiding officer may issue an order of default. The order shall include notice of opportunity to request that the default order be vacated pursuant to RCW 34.05.440(3). Unless vacated, a default order under this subsection shall be grounds for the presiding officer to proceed to decide the matter in the absence of the respondent and without additional notice to the respondent and to issue a final order.

(3) If a party requests an adjudicative proceeding but fails to appear at the hearing, the presiding officer may issue an order of default in the same manner as subsection (2) of

this section, or may proceed to hear the matter in the absence of the party and issue a final order.

(4) Final orders entered under this section shall meet the requirements of WAC 246-10-702 and shall contain:

(a) Findings of fact and conclusions of law based upon prima facie proof of the allegations contained in the initiating documents;

(b) Proof of service of or a good faith attempt to serve initiating documents and appropriate notices;

(c) A finding that there is no reason to believe that the party in default is in active military service;

(d) The penalties or conditions imposed by the order; and

(e) Notice of the opportunity to request reconsideration pursuant to RCW 34.05.470.

(5) Final and default orders entered under this section shall be served upon the parties in accordance with WAC 246-10-109.

(6) Notwithstanding subsections (1) through (5) of this section, if a party fails to respond to an initiating document issued consistent with the requirements of RCW 43.70.095 or 43.70.115, the initiating document shall become a final order upon its effective date unless the initiating document otherwise provides.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-10-204, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-204, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-204, filed 6/3/93, effective 7/4/93.]

WAC 246-10-205 Scheduling orders. (1) Within thirty days after receipt of the application for adjudicative proceeding, the office of professional standards, or other designee of the secretary, shall:

(a) Approve the application for full adjudicative procedure and issue and serve on the parties a scheduling order specifying the course of the proceeding; or

(b) Approve the application for a brief adjudicative procedure and issue and serve a notice of the date by which any additional written materials are to be submitted for consideration; or

(c) Deny the application according to RCW 34.05.416.

(2) For matters under chapter 18.130 RCW, the scheduling order shall contain:

(a) The date, time, and place of a settlement conference, a prehearing conference, and the hearing;

(b) The deadlines for completion of discovery and submission of prehearing motions; and

(c) The name, address, and telephone number of the assistant attorney general or other department representative who will represent the state in the matter.

(3) The scheduling order may be modified by order of the presiding officer upon his/her own initiative or upon motion of a party. Any request for a change in the scheduling order shall be made by motion as provided in WAC 246-10-403.

(4) The presiding officer may waive establishing dates for the settlement conference, completion of discovery, submission of prehearing motions, and the prehearing conference, if, in the discretion of the presiding officer, those proceedings are not necessary or appropriate in a particular matter or type of case. However, either party may request by

motion to the presiding officer that any or all of the dates be set.

(5) Dates contained in the scheduling order may be changed by the adjudicative clerk office upon written request of either party made within fifteen days of issuance of the first scheduling order. All other changes must be made by motion pursuant to WAC 246-10-403.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-205, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-205, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-205, filed 6/3/93, effective 7/4/93.]

SECTION III

EMERGENCY ADJUDICATIVE PROCEEDINGS

WAC 246-10-301 Conduct of emergency adjudicative proceedings. (1) Summary action may be taken only after a review by the secretary or designee of such evidence, including affidavits, if appropriate, to establish:

(a) The existence of an immediate danger to the public health, safety, or welfare;

(b) The department's ability to address the danger through a summary action; and

(c) The summary action necessary to address the danger.

(2) No notice to any person potentially affected by a summary action shall be required prior to issuance of a summary action.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-301, filed 6/3/93, effective 7/4/93.]

WAC 246-10-302 Effect of summary action. (1) Summary action takes effect upon entry of the order. Entry shall be the date of signature unless otherwise specified.

(2) No person shall be required to comply with a summary action until service has been made or the person has knowledge of the order, whichever occurs first.

(3) A summary action shall be served as promptly as practicable, in accordance with WAC 246-10-109.

(4) A summary action shall not be subject to the post-hearing process provided in WAC 246-10-701, et seq., but a summary action may be appealed to superior court as provided by law.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-302, filed 6/3/93, effective 7/4/93.]

WAC 246-10-303 Form and content of summary actions. (1) A summary action shall be entered in the form of an order containing findings of fact, conclusions of law, and the summary action imposed, as well as a statement of policy reasons for the decision.

(2) A summary action imposed by emergency adjudicative proceeding shall be limited to those actions necessary to alleviate an immediate danger to the public health, safety, or welfare.

(3) Initiating documents, and all other documents required by WAC 246-10-201, shall accompany a summary action order when served.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-303, filed 6/3/93, effective 7/4/93.]

WAC 246-10-304 Adjudicative proceedings upon summary action. Following summary action taken by the department, the respondent may:

- (1) Request a prompt adjudicative proceeding conducted in accordance with this chapter; or
- (2) Waive the prompt adjudicative proceeding and request a regularly scheduled adjudicative proceeding conducted in accordance with this chapter;
- (3) Waive the right to an adjudicative proceeding and submit a written statement to be considered prior to the entry of the final order; or
- (4) Waive the opportunity to be heard.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-304, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-304, filed 6/3/93, effective 7/4/93.]

WAC 246-10-305 Opportunity for prompt adjudicative proceeding. (1) Any respondent affected by a summary action shall be provided the opportunity to request a prompt adjudicative proceeding. Notice of the opportunity shall be provided in the notice of opportunity to defend against the allegations that are the basis for the summary action. The form for requesting an adjudicative proceeding shall include the option of requesting a prompt adjudicative proceeding.

(2) Any respondent affected by a summary action may request a prompt adjudicative proceeding, may elect a regularly scheduled adjudicative proceeding instead of a prompt adjudicative proceeding, or may waive the opportunity for adjudicative proceeding in accordance with WAC 246-10-203.

(3) Any request for a prompt adjudicative proceeding must be filed within ten days of the service of the summary action.

(4) If requested by the respondent, a prompt adjudicative proceeding shall be conducted within twenty days of service of a summary action.

(5) Regardless of whether a prompt adjudicative proceeding is requested, the matter shall be resolved as quickly as feasible in accordance with all other applicable rules.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-305, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-305, filed 6/3/93, effective 7/4/93.]

WAC 246-10-306 Proceedings prior to prompt adjudicative proceeding. A settlement conference may be requested, a settlement may be offered, and a prehearing conference may be conducted prior to a prompt adjudicative proceeding. Prehearing proceedings shall not delay a prompt adjudicative proceeding except by mutual agreement of the parties.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-306, filed 6/3/93, effective 7/4/93.]

SECTION IV

SETTLEMENT AND PREHEARING PROCEEDINGS

WAC 246-10-401 Settlement conference. (1) Following a request for an adjudicative proceeding, a settlement conference may be scheduled as provided in WAC 246-10-

(2003 Ed.)

205. The parties shall be notified of the date, time, and place of the settlement conference.

(2) The purpose of the settlement conference shall be to attempt to reach agreement on the issues and on a proposed order to be entered. Any agreement of the parties is subject to final approval by the presiding officer.

(3) The respondent shall attend the settlement conference as scheduled and may also be represented as provided in WAC 246-10-108. Representatives of the department will also attend. Other persons may attend by agreement of the parties.

(4) Either party may bring documents or other materials to the settlement conference for the purpose of settlement negotiations. No testimony will be taken. No documents or information submitted at the settlement conference will be admitted at the adjudicative proceeding unless stipulated by the parties or otherwise admitted into evidence by the presiding officer.

(5) If a settlement offer has been made in writing to the respondent and it is signed and returned by the respondent to the adjudicative clerk office prior to the settlement conference, all subsequent dates set in the scheduling order are continued pending final review of the settlement by the presiding officer.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-401, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-401, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-401, filed 6/3/93, effective 7/4/93.]

WAC 246-10-402 Discovery. The parties are encouraged to exchange information and documents related to the case prior to the adjudicative proceeding. Formal discovery is obtained as follows:

(1) Methods, scope and limits:

(a) Parties may obtain discovery by production of records or things; deposition upon oral examination; requests for admission; or, if ordered by the presiding officer, written interrogatories.

(b) Unless otherwise limited by order of the presiding officer in accord with these rules, the scope of discovery shall be as follows:

(i) Parties may obtain discovery regarding any matter not privileged, which is relevant to the subject matter in the pending action. It is not grounds for objection that the information sought will be inadmissible at the adjudicative proceeding if the information sought appears reasonably calculated to lead to the discovery of admissible evidence.

(ii) The frequency or extent of use of the discovery methods set forth in these rules shall be limited by the presiding officer if the presiding officer determines that:

(A) The discovery sought is unreasonably cumulative or duplicative, or is obtainable from another source that is more convenient, less burdensome, or less expensive; or

(B) The party seeking discovery has had an ample opportunity by discovery to obtain the information sought; or

(C) The discovery is unduly burdensome or expensive, taking into account the needs of the case, limitations of the parties' resources, and the importance of the issues at stake.

[Title 246 WAC—p. 73]

(iii) The presiding officer may limit discovery upon his or her own initiative after reasonable notice or pursuant to a motion submitted by a party.

(2) Production of records, documents or things:

(a) Upon written request of a party the opposing party shall identify experts and other witnesses to be called at a hearing and shall provide other information necessary to enable the party to conduct depositions of the witnesses.

(b) Any party may serve on any other party a request, which must be signed by the party or designated representative:

(i) To produce and permit the party making the request or designee to inspect and copy any designated documents, or to inspect and copy, test, or sample any tangible things which constitute or contain matters within the scope of discovery and which are in the possession, custody or control of the party upon whom the request is served; or

(ii) To permit entry onto designated land or other property which is in the possession or control of the party upon whom the request is served for the purpose of inspection, measuring, surveying, photographing, testing or sampling the property or designated object or operation thereon which is within the scope of discovery.

(c) Any party who produces documents for inspection shall produce them as they are kept in the usual course of business or may, if the parties agree, organize and label them to correspond with the categories in the request.

(d) The party upon whom a request is made may, by motion to the presiding officer, move for an order denying the request to produce or modifying the conditions of the request. Denial of the request or change in the conditions of the request shall be within the discretion of the presiding officer and shall be made by written order.

(3) Depositions may be taken subject to the following conditions:

(a) Within the United States or a territory or insular possession subject to the dominion of the United States, depositions shall be taken before an officer authorized to administer oaths by the state of Washington or of the place where the examination is held. A presiding officer may, in his or her discretion or following motion of a party, preside at the deposition. Within a foreign country, depositions shall be taken before a secretary of an embassy or legation, consul general, vice-consul or consular agent of the United States, or a person designated by the presiding officer or agreed upon by the parties by stipulation in writing filed with the office of professional standards. Except by stipulation, no deposition shall be taken before any person who is a party or a privy of a party, or a privy of any representative of a party, or who is financially interested in the proceeding.

(b) A party desiring to take the deposition of a person upon oral examination shall give reasonable notice of not less than five days in writing to the person to be deposed and to the opposing party. The notice shall state the time and place for taking the deposition, the name and address of each person to be examined, if known, and if the name is not known, a description sufficient to identify the person to be examined or the particular class or group to which the person to be examined belongs. On motion of a party upon whom the

notice is served, the presiding officer may for cause shown, lengthen or shorten the time.

(c) After notice is served for taking a deposition, or upon motion of the presiding officer or upon motion reasonably made by any party or by the person to be examined, and upon notice and for good cause, the presiding officer may issue an order that the deposition shall not be taken or that it be taken subject to specified restrictions, conditions, or limitations.

(d) Depositions shall be recorded.

(i) The officer before whom the deposition is taken shall put the witness on oath or affirmation and shall personally or by someone acting under the officer's direction and in the officer's presence, record the testimony.

(ii) The officer or person acting under the officer's direction shall transcribe the testimony at the request of any party, provided that any expenses shall be paid by the requesting party.

(iii) The transcribed testimony shall be submitted to the person deposed for review and signature, unless review and signature are waived by that person. The officer shall append to the transcript any changes in form or substance that may be submitted by the parties.

(iv) Copies of the transcribed and, unless review and signature has been waived, signed testimony shall be served upon the person deposed and upon the parties.

(e) If the parties so stipulate in writing or on the record, depositions may be taken before any person, at any time or place, upon any notice, and in any manner and when so taken, may be used as any other deposition.

(4) Following motion of a party and opportunity for response by the opposing party, the presiding officer may order a party to respond to written interrogatories and may order that the interrogatories be subject to specified restriction, condition, or limitation.

[Statutory Authority: RCW 43.70.040, 94-04-079, § 246-10-402, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-402, filed 6/3/93, effective 7/4/93.]

WAC 246-10-403 Motions. (1) The presiding officer shall rule on motions. The presiding officer may rule on motions without oral argument or may request or permit the parties to argue the motion in person or by telephone. Oral argument may be limited in time at the discretion of the presiding officer.

(2) All prehearing motions, including discovery and evidentiary motions, shall be made in writing and filed with the adjudicative clerk office prior to the dates set in the scheduling order.

(3) Motions for continuance must be made in writing and filed prior to the dates set in the scheduling order. If the adjudicative proceeding is scheduled to take place fewer than twenty days from service of the scheduling order, motions for continuance must be made within ten days of service of the scheduling order, but in no event fewer than five days prior to the hearing. Continuances may be granted by the presiding officer for good cause.

(4) The presiding officer may grant a continuance when a motion for continuance is not submitted within the time limits contained in subsection (3) of this section for good cause.

(5) The following is the recommended format for motions:

(a) A succinct statement of the facts contended to be material;

(b) A concise statement of the issue, issues or law upon which the presiding officer is requested to rule;

(c) The specific relief requested by the moving party;

(d) If the motion requires the consideration of facts or evidence not appearing on the record, the moving party shall also serve and file copies of all affidavits and photographic or documentary evidence presented in support of the motion;

(e) The legal authority upon which the motion is based; and

(f) A proposed order may accompany the motion, and should contain findings of fact and conclusions of law.

(6) The moving party shall file the motion, and the accompanying affidavits and photographic or documentary evidence when necessary, with the adjudicative clerk office and shall serve the motion, and the accompanying affidavits and photographic or documentary evidence when necessary, on all other parties.

(7) The opposing party shall file with the adjudicative clerk office, and serve upon the moving party, a responsive memorandum, and accompanying affidavits and photographic or documentary evidence when necessary, no later than eleven days following service of the motion, unless otherwise ordered by the presiding officer.

(8) The moving party may file with the adjudicative clerk office, and serve upon the opposing party, a reply memorandum no later than five days following service of the responsive memorandum, unless otherwise ordered by the presiding officer.

(9) Unless otherwise ordered by the presiding officer, all motions shall be decided without oral argument. A party requesting oral argument on a motion shall so indicate by typing "ORAL ARGUMENT REQUESTED" in the caption of the motion or the responsive memorandum. If a request for oral argument is granted, the presiding officer shall notify the parties of the date and time of the argument and whether the argument will be in person or by telephone conference.

(10) Motions to shorten time or emergency motions shall be exceptions to the rule, and a party may only make such motions in exigent or exceptional circumstances. When making such a motion, the moving party shall:

(a) Suggest a date and time when the moving party seeks to have the presiding officer hear the motion to shorten time, which should be at least forty-eight hours after filing;

(b) Suggest a date and time when the moving party seeks to have the presiding officer consider the merits of the underlying motion;

(c) Describe the exigent or exceptional circumstances justifying shortening of time in an affidavit or a memorandum accompanying the motion;

(d) Certify that the motion to shorten time and the underlying motion have been served on all other parties prior to the filing of the motion with the presiding officer. Any opposition to the motion to shorten time must be served and filed within twenty-four hours of the service of the motion. If the presiding officer grants the motion to shorten time, the presiding officer shall notify the parties of the date by which the

responsive memorandum to the underlying motion shall be served and filed.

(11) All motions will be decided as soon as practical, but not more than thirty days following the filing of the motion. If the presiding officer will not decide the motion within this time, the presiding officer shall notify the parties in writing of the date by which the motion will be decided.

(12) If a party serves a motion or responsive memorandum by mail, pursuant to WAC 246-10-109, then three days shall be added to the time within which the opposing party must file and serve the responsive or reply memorandum.

(13) All computations of time shall be calculated pursuant to WAC 246-10-105.

(14) Departmental motions for summary actions are exempted from all requirements of this rule.

[Statutory Authority: RCW 18.155.040, 97-12-089, § 246-10-403, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 18.130.050 and 43.70.040, 96-21-027, § 246-10-403, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040, 94-04-079, § 246-10-403, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-403, filed 6/3/93, effective 7/4/93.]

WAC 246-10-404 Prehearing conference. (1) As provided in WAC 246-10-205, the presiding officer may schedule a prehearing conference to be held prior to the hearing. Parties shall be notified of the time and place of the first prehearing conference in the scheduling order.

(2) The presiding officer shall conduct prehearing conferences and shall issue rulings related to prehearing motions and evidentiary issues. The rulings shall govern the conduct of subsequent proceedings.

(3) The prehearing conference may be recorded as ordered by the presiding officer. All offers of proof and objections concerning matters raised at the prehearing conference must be made on the record at the prehearing conference.

(4) Following the final prehearing conference, the presiding officer shall issue a written prehearing order which will:

(a) Identify the issues to be considered at the hearing and indicate which party has the burden of proof on these issues;

(b) Specify the facts which are admitted or not contested by the parties;

(c) Identify those documents and exhibits that will be admitted at hearing;

(d) Identify expert and lay witnesses that may be called at hearing and the issues to which those witnesses may testify;

(e) Rule on motions;

(f) Accept amendments to the pleadings;

(g) Address such other issues or matters as may be reasonably anticipated to arise and which may aid in the disposition of the proceedings; and

(h) Rule on objections made in any preserved testimony.

(5) Following the prehearing conference, the presiding officer may issue an order directing that the matter be heard as a brief adjudicative proceeding, pursuant to WAC 246-10-501, et seq.

(6) Documentary evidence not offered in the prehearing conference shall not be received into evidence at the adjudicative proceeding in the absence of a clear showing that the

offering party had good cause for failing to produce the evidence at the prehearing conference.

(7) Witnesses not identified during the prehearing conference shall not be allowed to testify at the adjudicative proceeding in the absence of a clear showing that the party offering the testimony of such witness had good cause for failing to identify the witness at the prehearing conference.

(8) If the authenticity of documents submitted at the prehearing conference is not challenged at the prehearing conference, the documents shall be deemed authentic. However, a party shall be permitted to challenge such authenticity at a later time upon a clear showing of good cause for failure to object at the prehearing conference.

(9) Nothing in these rules shall prohibit the presiding officer from conducting a conference at any time, including during the hearing. The presiding officer shall state on the record the results of such conference.

(10) A party bound by a stipulation or admission of record may withdraw it in whole or in part only upon a determination by the presiding officer or hearing officer that:

(a) The stipulation or admission was made inadvertently or as a bona fide mistake of fact or law; and

(b) The withdrawal will not unjustly prejudice the rights of the other parties.

(11) In an appeal to superior court involving issues addressed in the prehearing order, the record of the prehearing conference, written motions and responses, the prehearing order, and any orders issued by the presiding officer pursuant to WAC 246-10-403, shall be the record.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-404, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-404, filed 6/3/93, effective 7/4/93.]

WAC 246-10-405 Protective orders. The presiding officer may issue a protective order at his or her discretion:

(1) To protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense;

(2) To preserve confidentiality related to health care records or provider-client information;

(3) To protect examination processes;

(4) To protect the identity of a person supplying information to the department where the person indicates a desire for nondisclosure unless that person testifies or has been called to testify at an adjudicative proceeding; or

(5) To comply with applicable state or federal law.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-405, filed 6/3/93, effective 7/4/93.]

SECTION V BRIEF ADJUDICATIVE PROCEEDINGS

WAC 246-10-501 Application of brief adjudicative proceedings. (1) If an adjudicative proceeding is requested, a brief adjudicative proceeding will be conducted where the matter involves one or more of the following:

(a) A determination whether an applicant for a professional, business, or facility license meets the minimum criteria for an unrestricted license and the department proposes to deny such a license or to issue a restricted license;

(b) An application to approve a water system plan under WAC 246-290-100;

(c) An application to approve a project report under WAC 246-290-110;

(d) An application for source approval under WAC 246-290-130;

(e) An application to approve construction documents under WAC 246-290-120;

(f) An application to approve an existing Group A water system under WAC 246-290-140;

(g) An application for source approval under WAC 246-291-100 or 246-291-110;

(h) An application to approve a design report under WAC 246-291-120;

(i) An application to approve an existing Group B water system under WAC 246-291-130;

(j) An application to approve a water system plan under WAC 246-291-140;

(k) A decision under WAC 246-293-190;

(l) A decision with respect to service area conflicts under WAC 246-293-430;

(m) An application for approval as a satellite management agency under WAC 246-295-040;

(n) A civil penalty imposed under RCW 70.119A.040 when the amount of the civil penalty does not exceed two thousand five hundred dollars;

(o) A request to bank nursing home beds under RCW 70.38.111(8) and 70.38.115(13);

(p) A determination as to whether a person is in compliance with the terms and conditions of a final order previously issued by the department;

(q) Any approval of a school or curriculum when such approval by the department is required or authorized by statute or rule;

(r) A determination whether a license holder requesting renewal has submitted all required information and meets minimum criteria for license renewal; or

(s) A decision to deny, modify, or impose conditions upon an operating permit under WAC 246-294-050.

(2) If an adjudicative proceeding is requested, in a matter not listed in subsection (1) of this section, a brief adjudicative proceeding may be conducted in the discretion of the presiding officer when it appears that protection of the public interest does not require that the department provide notice and an opportunity to participate to persons other than the parties and:

(a) Only legal issues exist; or

(b) Both parties have agreed to a brief proceeding.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-10-501, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-501, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-501, filed 6/3/93, effective 7/4/93.]

WAC 246-10-502 Preliminary record in brief adjudicative proceedings. (1) The preliminary record with respect to an application for a professional, business, or facility license, or for approval of a school or curriculum shall consist of the following:

(a) The application for the license or approval and all associated documents;

(b) All documents relied on by the program in proposing to deny the application;

(c) All correspondence between the applicant for license or approval and the program regarding the application.

(2) Preliminary record.

(a) The preliminary record with respect to decisions made under WAC 246-290-100, 246-290-110, 246-290-120, 246-290-130, 246-290-140, 246-291-100, 246-291-110, 246-291-120, 246-291-130, and 246-291-140 shall consist of the decision document, all documents constituting the applicant's submittal and such other documents as the applicant or the departmental employee reviewing the submittal may wish to include in the preliminary record.

(b) WAC 246-293-190.

(i) If proceedings are required and have been conducted by local agencies under the applicable coordinated water system plan, the preliminary record shall consist of the record submitted to the department under WAC 246-10-124(3).

(ii) If hearings are not required or have not been conducted by local agencies under the applicable coordinated water system plan or if the external boundaries of the coordination act area have been approved but a coordinated water system plan has not been adopted, then the preliminary record shall consist of such documents as the presiding officer may solicit from the affected parties.

(c) The preliminary record with respect to a decision made under WAC 246-293-430 shall consist of the record submitted to the presiding officer under WAC 246-10-124(4).

(d) The preliminary record with respect to a decision under WAC 246-294-050 shall consist of:

(i) The permit, if any;

(ii) All documents relied upon by the program in proposing to deny, modify, or impose conditions upon the permit; and

(iii) The decision document.

(e) The preliminary record with respect to decisions made under WAC 246-295-040 shall consist of the decision document, all documents constituting the applicant's submittal, comments submitted by the county, and such other documents as the applicant or the department may wish to include in the preliminary record.

(f) The preliminary record with respect to civil penalties imposed under RCW 70.119A.040 shall consist of the notice of imposition of penalties, the departmental order, if any, all documentation of communication between the program and the person or persons incurring the civil penalties regarding the violation or violations for which the civil penalties were imposed, and such other documents as the person or persons incurring the civil penalties or the department may wish to include in the preliminary record.

(3) The preliminary record with respect to compliance with prior department orders shall consist of:

(a) The official department file of the proceeding in which the order was issued;

(b) All matters submitted by the person to whom the order is directed purporting to demonstrate compliance with the order;

(c) All documents relied on by the department in asserting noncompliance; and

(2003 Ed.)

(d) All correspondence between the department and the person to whom the order is directed respecting compliance.

(4) The preliminary record with respect to matters submitted to a brief adjudicative proceeding under WAC 246-10-501(2) shall be as agreed by the parties.

(5) For the purposes of this section, "decision document" shall mean one or more documents that provide notice to the affected party of the department's action, and that contain(s) the information provided by an initiating document.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-10-502, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-502, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-502, filed 6/3/93, effective 7/4/93.]

WAC 246-10-503 Conduct of brief adjudicative proceedings. (1) Brief adjudicative proceedings shall be conducted by a presiding officer for brief adjudicative proceedings designated by the assistant secretary having responsibility for the program that issued the initiating document that is the subject of the proceeding. The presiding officer for brief adjudicative proceedings shall have agency expertise in the subject matter but shall not have personally participated in the decision to issue the initiating document.

(2) The parties or their representatives may present written documentation in addition to the preliminary record. The presiding officer for brief adjudicative proceedings shall designate the date by which written documents must be submitted by the parties.

(3) The presiding officer for brief adjudicative proceedings may, in his or her discretion, entertain oral argument from the parties or their representatives, at a time and place designated by the presiding officer for brief adjudicative proceedings.

(4) No witnesses may appear to testify.

(5) In addition to the record, the presiding officer for brief adjudicative proceedings may employ agency expertise as a basis for decision.

(6) The presiding officer for brief adjudicative proceedings shall not issue an oral order. Within ten days of the final date for submission of materials or oral argument, if any, the presiding officer for brief adjudicative proceedings shall enter an initial order in accordance with WAC 246-10-608.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-10-503, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-503, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-503, filed 6/3/93, effective 7/4/93.]

WAC 246-10-504 Effectiveness of orders on brief adjudicative proceedings. (1) Initial orders on brief adjudicative proceedings shall become final twenty-one days after service of the initial order unless:

(a) Administrative review has been requested pursuant to WAC 246-10-701; or

(b) On his or her own initiative, a designee of the secretary authorized to issue final orders determines to review the matter and, within twenty-one days of service of the initial order, provides notice to the parties of the date by which a determination shall be made.

(2) If administrative review is taken under subsection (1) of this section, each party shall be provided an opportunity to

[Title 246 WAC—p. 77]

state its view of the matter, and the presiding officer shall issue a written order containing findings of fact, conclusions of law, and order which shall be entered and served upon the parties within twenty days of service of the initial order or the request for review whichever is later.

(3) A request for review is deemed to be denied if the presiding officer does not act on the request within twenty days after the request is submitted.

(4) If administrative review is taken under subsection (1) of this section, the presiding officer may convert the matter to a full adjudicative proceeding.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-504, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-504, filed 6/3/93, effective 7/4/93.]

WAC 246-10-505 Agency record in brief proceedings. The agency record of brief adjudicative proceedings shall consist of:

- (1) The preliminary record as set forth in WAC 246-10-502;
- (2) All initiating documents including the notice of opportunity to defend;
- (3) The request for adjudicative proceeding;
- (4) All documents submitted in the proceeding;
- (5) Any transcript or recording of any arguments presented; and
- (6) All orders issued in the case.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-505, filed 6/3/93, effective 7/4/93.]

SECTION VI HEARING

WAC 246-10-601 Notice of adjudicative proceeding.

Notice of an adjudicative proceeding shall be issued pursuant to RCW 34.05.434.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-601, filed 6/3/93, effective 7/4/93.]

WAC 246-10-602 Conduct of adjudicative proceeding. (1) The adjudicative proceeding shall be conducted as provided in RCW 34.05.449 through 34.05.455.

(2) The presiding officer may take the following actions to the extent not already determined in a prehearing order:

- (a) Conduct the hearing de novo;
- (b) Determine the order of presentation of evidence;
- (c) Administer oaths and affirmations;
- (d) Issue subpoenas;
- (e) Rule on procedural matters, objections, motions, and offers of proof;
- (f) Receive relevant evidence;
- (g) Interrogate witnesses called by the parties in an impartial manner to develop any facts necessary to fairly and adequately decide the matter;
- (h) Call additional witnesses and request additional exhibits deemed necessary to complete the record and receive such evidence subject to full opportunity for cross-examination and rebuttal by all parties;
- (i) Take any appropriate action necessary to maintain order during the adjudicative proceeding;

[Title 246 WAC—p. 78]

(j) Determine whether to permit or require oral argument or briefs and determine the time limits for submission thereof;

(k) Permit photographic and recording equipment at hearing subject to conditions necessary to preserve confidentiality and prevent disruption;

(l) Permit a person to waive any right conferred upon that person by chapter 34.05 RCW or this chapter, except as precluded by law; and

(m) Take any other action necessary and authorized by applicable law or rule.

(3) The presiding officer shall:

(a) Apply as the first source of law governing an issue those statutes and rules deemed applicable to the issue;

(b) If there is no statute or rule governing the issue, resolve the issue on the basis of the best legal authority and reasoning available, including that found in federal and Washington constitutions, statutes, rules, and court decisions; and

(c) Not declare any statute or rule invalid.

(4) If the validity of any statute or rule is raised as an issue, the presiding officer may permit arguments to be made on the record concerning the issue for the purpose of subsequent review.

(5) A party may move to disqualify the presiding officer pursuant to RCW 34.05.425(3).

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-602, filed 6/3/93, effective 7/4/93.]

WAC 246-10-603 Evidence. (1) The presiding officer shall rule on objections to the admissibility of evidence pursuant to RCW 34.05.452 unless those objections have been addressed in the prehearing order.

(2) The refusal of a witness to answer any question ruled proper shall be grounds for the presiding officer, at his/her discretion, to strike some or all prior testimony by that witness on related matters or to grant a continuance to allow a party to seek a court order to compel the witness to answer.

(3) Each person called as a witness in an adjudicative proceeding shall swear or affirm that the evidence about to be given in the adjudicative proceeding shall be the truth under the provisions of RCW 5.28.020 through 5.28.060.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-603, filed 6/3/93, effective 7/4/93.]

WAC 246-10-604 Proposed order. At the conclusion of the hearing or by a date specified by the presiding officer, the presiding officer may require each party to submit to the presiding officer proposed findings of fact and conclusions of law and a proposed order.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-604, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-604, filed 6/3/93, effective 7/4/93.]

WAC 246-10-605 Issuance of final order. If the adjudicative proceeding is conducted by a presiding officer authorized to make the final decision, the presiding officer shall:

(1) Issue a final order containing findings of fact and conclusions of law and an order; and

(2) Cause the adjudicative clerk office to serve a copy of the order on each party and any designated representative of the party.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-605, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-605, filed 6/3/93, effective 7/4/93.]

WAC 246-10-606 Standard of proof. The order shall be based on the kind of evidence upon which reasonably prudent persons are accustomed to rely in the conduct of their affairs. In all cases involving an application for license the burden shall be on the applicant to establish that the application meets all applicable criteria. In all other cases the burden is on the department to prove the alleged factual basis set forth in the initiating document. Except as otherwise provided by statute, the burden in all cases is a preponderance of the evidence.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-606, filed 6/3/93, effective 7/4/93.]

WAC 246-10-607 Consolidated proceedings. (1) When two or more applications for adjudicative proceeding involve a similar issue, the applications may be consolidated by the presiding officer and the hearings conducted together. The presiding officer may consolidate on his/her own motion or upon the request of a party.

(2) A party scheduled for a consolidated proceeding may request to withdraw from the consolidated proceeding in favor of an individual proceeding. The presiding officer may grant a motion to withdraw from a consolidated proceeding at any time when good cause is shown.

(3) Each respondent in a consolidated proceeding shall retain the right to representation.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-607, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-607, filed 6/3/93, effective 7/4/93.]

WAC 246-10-608 Initial order. If the adjudicative proceeding is conducted by a presiding officer who is not authorized to make the final decision, the presiding officer shall:

(1) Issue an initial order containing proposed findings of fact, conclusions of law, and a proposed order;

(2) Cause the adjudicative clerk office to serve a copy of the initial order on each party and any designated representative of a party; and

(3) Forward the initial order and record of the adjudicative proceeding to the adjudicative clerk office.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-608, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-608, filed 6/3/93, effective 7/4/93.]

SECTION VII POSTHEARING PROCESS

WAC 246-10-701 Appeal from initial order. (1) Any party may file a written petition for administrative review of an initial order issued under WAC 246-10-503 or 246-10-608 stating the specific grounds upon which exception is taken and the relief requested.

(2003 Ed.)

(2) Petitions for administrative review must be served upon the opposing party and filed with the adjudicative clerk office within twenty-one days of service of the initial order.

(3) The opposing party may file a response to a petition for administrative review filed as provided in this section. The response shall be filed at the adjudicative clerk office. The party filing the response shall serve a copy of the response upon the party requesting administrative review. If the initial order was entered pursuant to WAC 246-10-503, the response shall be filed within ten days of service of the petition. In all other matters, the response shall be filed within twenty days of service of the petition.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-701, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-701, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-701, filed 6/3/93, effective 7/4/93.]

WAC 246-10-702 Final orders. (1) The form and content of final orders shall be as follows:

(a) Final orders shall contain findings of fact, conclusions of law, and an order, and shall be signed by the presiding officer.

(b) Final orders may adopt by reference the initial order in whole or in part.

(c) Final orders may modify or revise the initial order in whole or in part.

(2) Final orders shall be served upon the parties and their representatives as provided in WAC 246-10-109.

(3) Final orders shall be issued following:

(a) A review of the record;

(b) A review of the initial order, if any;

(c) A review of any request for administrative review of the initial order and any response thereto; and

(d) Consideration of protection of the public health and welfare.

(4) Unless a later date is stated in the final order, final orders shall be effective when entered but a party shall not be required to comply with a final order until the order is served upon that party.

(5) Final orders may contain orders that specified portions of the agency record shall not be disclosed as public records if necessary to protect privacy interests, the public welfare, or vital governmental functions. Such orders shall include but are not limited to protective orders issued during the proceeding or pursuant to WAC 246-10-405.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-702, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-702, filed 6/3/93, effective 7/4/93.]

WAC 246-10-703 Stay of final orders. No final order will be stayed except by its own terms or by order of a court of competent jurisdiction.

[Statutory Authority: RCW 43.70.040. 93-13-005 (Order 369), § 246-10-703, filed 6/3/93, effective 7/4/93.]

WAC 246-10-704 Reconsideration of final orders. (1) Within ten days of service of a final order, either party may file a petition for reconsideration, stating the specific grounds upon which reconsideration is requested and the relief requested.

[Title 246 WAC—p. 79]

(2) Grounds for reconsideration shall be limited to:

(a) Specific errors of fact or law; or

(b) Implementation of the final order would require department activities inconsistent with current department practice; or

(c) Specific circumstances render the person requesting reconsideration unable to comply with the terms of the order.

(3) Petitions for reconsideration must be served upon the opposing party and filed with the adjudicative clerk office within ten days of service of the final order.

(4) If reconsideration is requested based on an error of fact, the request for reconsideration shall contain specific reference to the record. If reconsideration is requested based on testimony of record, the request for reconsideration shall contain specific reference to the testimony. The presiding officer may require that the party requesting reconsideration submit a copy of the transcript of the adjudicative proceeding and provide specific reference to the transcript.

(5) The petition for reconsideration is denied if, within twenty days of the date the petition is filed, the presiding officer:

(a) Denies the petition;

(b) Does not act upon the petition; or

(c) Does not serve the parties with notice of the date by which he/she will act on the petition.

(6) If the presiding officer determines to act upon the petition, the opposing party shall be provided at least ten days in which to file a response to the petition.

(7) Disposition of petitions for reconsideration shall be in the form of a written order denying the petition, granting the petition, and dissolving or modifying the final order, or granting the petition and setting the matter for further proceedings.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-704, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-704, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-704, filed 6/3/93, effective 7/4/93.]

WAC 246-10-705 Agency record of adjudicative proceedings. (1) The department shall maintain an official record of each adjudicative proceeding.

(2) The record shall include:

(a) Notices of all proceedings;

(b) Any prehearing order;

(c) Any motions, pleadings, briefs, petitions, and requests filed, and rulings thereon;

(d) Evidence received or considered;

(e) A statement of matters officially noted;

(f) Offers of proof and objections and rulings thereon;

(g) Any proposed findings, requested orders, and exceptions;

(h) Any recording of the adjudicative proceeding and any transcript of all or part of the adjudicative proceeding considered before final disposition of the matter;

(i) Any final order, initial order, or order on reconsideration; and

(j) Matters placed on the record following an ex parte communication, if any.

(3) The record shall be subject to disclosure as provided by chapter 42.17 RCW, the Public Records Act, and by WAC

246-10-114, except as limited by protective orders and provisions contained in the final order.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-705, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-705, filed 6/3/93, effective 7/4/93.]

WAC 246-10-706 Judicial review. (1) Judicial review of actions taken under this chapter shall be as provided in RCW 34.05.510, et seq.

(2) Notice of the opportunity for judicial review shall be provided in all final orders.

(3) Following a petition for judicial review, the record forwarded to the reviewing court shall be those portions of the agency record designated by the parties within the time period set by the secretary.

[Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-706, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-706, filed 6/3/93, effective 7/4/93.]

WAC 246-10-707 Vacating an order for reason of default or withdrawal. (1) A party may petition to vacate a default order entered against that party for failing to attend an adjudicative proceeding requested by that party by:

(a) Specifying the grounds relied upon in the petition; and

(b) Filing the petition at the adjudicative clerk office within seven days of service of the default order.

(2) The presiding officer shall consider the petition and shall:

(a) Grant the motion to vacate and reinstate the application for adjudicative proceeding, and may impose conditions on licensure pending final adjudication; or

(b) Deny the motion to vacate the default order.

[Statutory Authority: RCW 18.155.040. 97-12-089, § 246-10-707, filed 6/4/97, effective 7/5/97. Statutory Authority: RCW 43.70.040. 94-04-079, § 246-10-707, filed 1/31/94, effective 3/3/94; 93-13-005 (Order 369), § 246-10-707, filed 6/3/93, effective 7/4/93.]

Chapter 246-11 WAC

MODEL PROCEDURAL RULES FOR BOARDS

WAC

SECTION I PRELIMINARY MATTERS

246-11-001	Purpose and application of chapter.
246-11-010	Definitions.
246-11-020	Signature authority.
246-11-030	Appearance of parties.
246-11-040	Computation of time.
246-11-050	Notarization, certification, and authentication.
246-11-060	Current address.
246-11-070	Representation.
246-11-080	Service and filing.
246-11-090	Jurisdiction.
246-11-100	Telephone proceedings.
246-11-110	Hearing location.
246-11-120	Good faith requirement.
246-11-130	Public records.
246-11-140	Expenses and witness fees.
246-11-150	Immunity.
246-11-160	Official notice and agency expertise.
246-11-170	Sanctions.
246-11-180	Intervention.
246-11-190	Form of pleadings and orders.
246-11-200	Notice to limited-English-speaking parties.
246-11-210	Interpreters.
246-11-220	Subpoenas.

246-11-230 Presiding officer and panel members.

SECTION II
INITIATING ACTIONS

246-11-250 Form and content of initiating documents.
246-11-260 Amendment of initiating documents.
246-11-270 Request for adjudicative proceeding.
246-11-280 Default.
246-11-290 Scheduling orders.

SECTION III
EMERGENCY ADJUDICATIVE PROCEEDINGS

246-11-300 Conduct of emergency adjudicative proceedings.
246-11-310 Effect of summary action.
246-11-320 Form and content of summary actions.
246-11-330 Adjudicative proceedings upon summary action.
246-11-340 Opportunity for prompt adjudicative proceeding.
246-11-350 Proceedings prior to prompt adjudicative proceeding.

SECTION IV
SETTLEMENT AND PREHEARING PROCEEDINGS

246-11-360 Settlement conference.
246-11-370 Discovery.
246-11-380 Motions.
246-11-390 Prehearing conference.
246-11-400 Protective orders.

SECTION V
BRIEF ADJUDICATIVE PROCEEDINGS

246-11-420 Application of brief adjudicative proceedings.
246-11-425 Preliminary record in brief adjudicative proceedings.
246-11-430 Conduct of brief adjudicative proceedings.
246-11-440 Effectiveness of orders on brief adjudicative proceedings.
246-11-450 Agency record in brief proceedings.

SECTION VI
HEARING

246-11-470 Notice of adjudicative proceeding.
246-11-480 Conduct of adjudicative proceeding.
246-11-490 Evidence.
246-11-500 Proposed order.
246-11-510 Issuance of final order.
246-11-520 Standard of proof.
246-11-530 Consolidated proceedings.
246-11-540 Initial order.

SECTION VII
POST HEARING PROCESS

246-11-550 Appeal from initial order.
246-11-560 Final orders.
246-11-570 Stay of final orders.
246-11-580 Reconsideration of final orders.
246-11-590 Agency record of adjudicative proceedings.
246-11-600 Judicial review.
246-11-610 Vacating an order for reason of default or withdrawal.

**SECTION I
PRELIMINARY MATTERS**

WAC 246-11-001 Purpose and application of chapter. (1) This chapter contains model rules for adjudicative proceedings authorized to be conducted under the authority of a board having disciplining authority under the Uniform Disciplinary Act, chapter 18.130 RCW. Each board may adopt these rules as contained in this chapter or as modified.

(2) This chapter, as modified and adopted by the board, shall apply to adjudicative proceedings authorized to be conducted under the authority of the board.

(3) This chapter applies to adjudicative proceedings begun on or after the effective date of this chapter in programs administered by the board. For purposes of this section, "begun" shall mean the receipt by the appropriate office of an application for an adjudicative proceeding. These rules

(2003 Ed.)

shall be the exclusive rules governing adjudicative proceedings under the jurisdiction of the board.

(4) To the extent that these rules differ by inclusion, deletion, or content from the model rules adopted by the chief administrative law judge pursuant to RCW 34.05.250, this chapter shall prevail in order to provide a process consistent with the organization of the department and the board.

(5) Where a provision of this chapter conflicts with another chapter of Title 246 WAC, the provision of this chapter shall prevail.

(6) Where a provision of this chapter conflicts with a provision of the Revised Code of Washington, the statute shall prevail.

[Statutory Authority: RCW 18.130.050(1), 34.05.220 and 4.24.250. 93-08-003 (Order 347), § 246-11-001, filed 3/24/93, effective 4/24/93.]

WAC 246-11-010 Definitions. As used in these rules of practice and procedure, the following terms shall have the meaning set forth in this section unless the context clearly indicates otherwise. Other terms shall have their ordinary meaning unless defined elsewhere in this chapter.

"Adjudicative clerk office" shall mean the unit with responsibility for: Docketing; service of orders; and maintaining custody of the adjudicative proceeding record, whose address is:

Department of Health
Adjudicative Clerk Office
2413 Pacific Avenue
PO Box 47879
Olympia, WA 98504-7879

"Adjudicative proceeding" or "hearing" shall mean a proceeding required by statute or constitutional right and conducted under the rules of this chapter, which provides an opportunity to be heard by the board prior to the entry of a final order under this chapter.

"Board" shall mean a disciplining authority under RCW 18.130.040 (2)(b) and (3).

"Brief adjudicative proceeding" shall mean an adjudicative proceeding or hearing, the scope or conduct of which is limited as provided in this chapter.

"Department" shall mean the Washington state department of health and, where appropriate, the secretary of the Washington state department of health or the secretary's designee.

"Docket" or "docketing" shall mean the list or calendar of causes set to be heard at a specified time, prepared by the adjudicative clerk office for the use of the department.

"Filing" shall mean receipt by the adjudicative clerk office.

"Initiating document" shall mean a written agency document which initiates action against a license holder or applicant for license and which creates the right to an adjudicative proceeding. It may be entitled a statement of charges, notice of intent to deny, or by any other designation indicating the action or proposed action to be taken.

"License" shall have the meaning set forth in RCW 34.05.010 and includes license to practice the profession for which the board is the disciplining authority and any

approval of school or curriculum required by law or rule to be obtained from the board.

"Presiding officer" shall mean the person who is assigned to conduct an adjudicative proceeding and who may either be a member of the board, an individual appointed pursuant to RCW 18.130.095(3), or an administrative law judge employed by the office of administrative hearings.

"Presiding officer for brief adjudicative proceedings" shall mean an employee of the department authorized by the board to conduct brief adjudicative proceedings.

"Program" shall mean the administrative unit within the department responsible for implementation of that chapter of Title 18 RCW establishing the board or its powers and responsibilities.

"Prompt adjudicative proceeding" or "prompt hearing" shall mean a hearing conducted at the request of the license holder or applicant for license following summary action taken in accord with this chapter against that license holder or applicant.

"Protective order" shall mean an order issued under this chapter which limits the use of, access to, or disclosure of information or evidence.

"Respondent" shall mean a license holder or applicant for license under the jurisdiction of the board who is named in an initiating document.

"Secretary" shall mean the secretary of the department of health or his/her designee.

"Summary action" shall mean an agency action to address an immediate danger to the public health, safety, or welfare and shall include, but not be limited to, a cease and desist order, an order of summary suspension, and an order of summary restriction of a license.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-010, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-010, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.220, 93-08-003 (Order 347), § 246-11-010, filed 3/24/93, effective 4/24/93.]

WAC 246-11-020 Signature authority. (1) A person designated by the board shall sign all initiating documents issued under this chapter.

(2) All final orders shall be signed by a member of the panel of board members who heard the matter.

(3) All other orders shall be signed by the presiding officer conducting the proceeding.

(4) Authority to sign shall be indicated by designation of the title of the person signing and shall not require any other affirmation, affidavit, or allegation.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-020, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-020, filed 3/24/93, effective 4/24/93.]

WAC 246-11-030 Appearance of parties. If a respondent requests an adjudicative proceeding to contest the action, that party shall appear at all stages of the proceeding except as otherwise provided in this section.

(1) If the respondent is represented as provided in this chapter, the respondent shall appear personally at the hearing and at any scheduled settlement conference but need not

appear at the prehearing conference or at presentation of motions.

(2) Parties may be represented by counsel at all proceedings.

(3) The respondent may appear by telephone at any portion of the proceedings conducted by telephone, in the discretion of the presiding officer following reasonable advance notice to the presiding officer and to the opposing party.

(4) The requirement of personal appearance may be waived for good cause in the discretion of the presiding officer.

(5) Failure to appear as provided in this chapter shall be grounds for taking final action by default.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-030, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-030, filed 3/24/93, effective 4/24/93.]

WAC 246-11-040 Computation of time. (1) When computing a period of time prescribed or allowed by an applicable statute or rule, the day of the act, event, or default from which the designated period of time begins to run shall not be included.

(2) The last day of the computed period shall be included unless the last day is a Saturday, Sunday, or legal holiday.

(3) When the last day is a Saturday, Sunday, or legal holiday, the period shall run until the end of the next day which is not a Saturday, Sunday, or legal holiday.

(4) When the period of time prescribed or allowed is seven days or less, any intermediate Saturday, Sunday, and legal holiday shall be excluded from the computation.

[Statutory Authority: RCW 18.130.050(1) and 34.05.220, 93-08-003 (Order 347), § 246-11-040, filed 3/24/93, effective 4/24/93.]

WAC 246-11-050 Notarization, certification, and authentication. (1) A person's sworn written statement, declaration, verification, certificate, oath, or affidavit may be authenticated by an unsworn written statement which is executed in substantially the following form:

I certify (or declare) under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

(Date and Place)

(Signature)

(2) Documents or records may be authenticated by a certification, as provided in subsection (1) of this section, from the custodian of the records or other qualified person that the documents or records are what they purport to be.

(3) Signature of any attorney shall be accompanied by and authenticated by that attorney's Washington State Bar Association number.

(4) Documents prepared and submitted by a party who is not represented by an attorney shall be signed and dated by that party and shall include that party's current address.

(5) Signature by a party or an attorney on a document shall constitute a certificate by the party or attorney that he/she has read the document, believes there are grounds to support it, and has not submitted the document for the pur-

pose of delay, harassment, or needless increase in the cost of a proceeding.

(6) Compliance with certification requirements of subsections (1) and (2) of this section creates a rebuttable presumption that a document is authentic.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-050, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-050, filed 3/24/93, effective 4/24/93.]

WAC 246-11-060 Current address. Each license holder and applicant shall provide a current mailing address and all subsequent address changes to the program. Whenever service upon any such person is required by these rules, the most recent address provided may be used unless the program has actual knowledge that the person resides at a different address.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-060, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-060, filed 3/24/93, effective 4/24/93.]

WAC 246-11-070 Representation. (1) License holders, applicants for license, and recipients of benefits may be represented subject to the following conditions:

(a) A license holder or applicant for license may represent himself/herself or may be represented by an attorney who has complied with the admission to practice rules of the supreme court of the state of Washington;

(b) Every attorney representing a license holder or applicant for license shall file a notice of appearance with the adjudicative clerk office upon commencing representation, and shall file a notice of withdrawal of counsel with the adjudicative clerk office upon terminating representation.

(c) No license holder or applicant may be represented in an adjudicative proceeding by an employee of the department.

(2) No current or former employee of the department may appear as an expert, character witness, or representative of any party other than the state of Washington if he/she took an active part in investigating or evaluating the case or represented the agency in the matter, unless written permission of the secretary is granted. No current or former member of the attorney general's office staff who participated personally and substantially in investigating or evaluating the matter at issue while so employed may represent a party or otherwise participate in a related proceeding without first having obtained the written consent of the attorney general's office.

[Statutory Authority: RCW 18.155.040. 97-13-015, § 246-11-070, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-070, filed 3/24/93, effective 4/24/93.]

WAC 246-11-080 Service and filing. (1) A party filing a pleading, brief, or paper other than an initiating document or application for an adjudicative proceeding as required or permitted by these rules, shall serve a copy of the paper upon the opposing party or any designated representative of the opposing party prior to or simultaneous with filing.

(2) Unless otherwise provided by law, filing and service shall be made by personal service; first class, registered, or certified mail.

(2003 Ed.)

(3) Filing shall be complete upon actual receipt during normal business hours at the adjudicative clerk office, unless filing is directed in writing to be made to another address.

(4) Service shall be complete when personal service is made; mail is properly stamped, addressed, and deposited in the United States mail.

(5) Proof of service shall consist of filing as required by these rules, together with one of the following:

(a) An acknowledgement of service;

(b) A certificate of service including the date the papers were served, the parties upon whom served, the signature of the serving party, and a statement that service was completed by:

(i) Personal service; or

(ii) Mailing in the United States mail a copy properly addressed with postage and fees prepaid to each party and each designated representative.

[Statutory Authority: RCW 18.155.040. 97-13-015, § 246-11-080, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-080, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-080, filed 3/24/93, effective 4/24/93.]

WAC 246-11-090 Jurisdiction. (1) The board has jurisdiction over all licenses issued by the board and over all holders of and applicants for licenses as provided in RCW 18.130.040 (2)(b) and (3). Such jurisdiction is retained even if an applicant requests to withdraw the application, or a licensee surrenders or fails to renew a license.

(2) The department has jurisdiction over unlicensed practice of any activity for which a license is required.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-090, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-090, filed 3/24/93, effective 4/24/93.]

WAC 246-11-100 Telephone proceedings. (1) The presiding officer may conduct all or part of the proceedings or permit a party or witness to appear by telephone or other electronic means if each participant in the proceedings has an opportunity to participate in, hear, and, if technically and economically feasible, see the entire proceeding while it is taking place. Cost of such appearance may be assessed to the party so appearing or on whose behalf the witness appears.

(2) If all or part of the proceedings is conducted as provided in subsection (1) of this section, the parties shall file and serve copies of all documentary evidence no less than three days prior to the proceeding. The presiding officer may, for good cause, allow exceptions to this requirement.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-100, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 4.24.250. 93-08-003 (Order 347), § 246-11-100, filed 3/24/93, effective 4/24/93.]

WAC 246-11-110 Hearing location. The presiding officer shall designate sites for the conduct of proceedings taking into account accessibility, efficiency, and economy.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-110, filed 1/31/94, effective 3/3/94; 93-08-003 (Order 347), § 246-11-110, filed 3/24/93, effective 4/24/93.]

WAC 246-11-120 Good faith requirement. Good faith shall be the standard for compliance with these rules. Failure to make a good faith effort to comply with these rules shall be grounds for sanctions as provided in this chapter.

[Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-120, filed 3/24/93, effective 4/24/93.]

WAC 246-11-130 Public records. (1) All papers, exhibits, transcripts, and other materials required by or submitted in accordance with this chapter shall be considered public records.

(2) Release of information on a request for public records shall be subject to the following limitations:

(a) Release of health care information shall comply with chapter 70.02 RCW and rules promulgated thereunder;

(b) Protective orders issued pursuant to WAC 246-11-400 shall prevail; and

(c) Chapter 42.17 RCW shall govern the release of records.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-130, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-130, filed 3/24/93, effective 4/24/93.]

WAC 246-11-140 Expenses and witness fees. (1) Fees and expenses shall be paid at the following rates to witnesses appearing under subpoena by the party requesting the appearance:

(a) Fees shall be paid at the daily rate established for jurors in district court of Thurston County; and

(b) Expenses shall be paid at the rate established for employees of the state of Washington, or as otherwise required by law.

(2) Fees for an expert witness shall be negotiated by and paid by the party requesting services of the expert.

(3) All expenses incurred in connection with proceedings under this chapter shall be paid by the party incurring the expense.

(4) The program shall pay expenses associated with:

(a) The facility in which proceedings are conducted; and

(b) Recording of the proceedings.

(5) Expenses related to preparation and distribution of the transcript of proceedings shall be paid by the party filing a motion or request for review of an initial order or petition for reconsideration, appealing a final order, or otherwise requesting the transcript.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-140, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 18.130.060(3) and 34.05.566, 93-08-003 (Order 347), § 246-11-140, filed 3/24/93, effective 4/24/93.]

WAC 246-11-150 Immunity. The legislature has determined that persons who file complaints with or provide information to the department or board regarding health care practitioners licensed by the board or department are immune from civil liability, provided that such persons have acted in good faith. RCW 4.24.240 through 4.24.260, 18.130.170, 18.130.180, and 18.130.300 set forth the provisions under which immunity is granted.

[Title 246 WAC—p. 84]

[Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-150, filed 3/24/93, effective 4/24/93.]

WAC 246-11-160 Official notice and agency expertise. (1) Official notice may be taken as provided in RCW 34.05.452(5).

(2) The board may use its expertise and specialized knowledge to evaluate and draw inferences from the evidence presented to it.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-160, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.452(5), 93-08-003 (Order 347), § 246-11-160, filed 3/24/93, effective 4/24/93.]

WAC 246-11-170 Sanctions. (1) Orders may include sanctions against either party.

(2) Grounds for sanctions may include:

(a) Failure to comply with these rules or orders of the presiding officer; and

(b) Willful interference with the progress of proceedings.

(3) Sanctions may include:

(a) Dismissal of the matter;

(b) Proceeding in default; and

(c) Other sanctions as appropriate.

(4) The order shall state the grounds upon which any sanctions are imposed.

[Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-170, filed 3/24/93, effective 4/24/93.]

WAC 246-11-180 Intervention. (1) The presiding officer may grant a petition for intervention pursuant to RCW 34.05.443.

(2) A request to intervene shall be handled as a pre-hearing motion and shall be subject to the dates contained in the scheduling order. Within the sound exercise of discretion, the presiding officer may allow intervention if:

(a) The intervenor is not a party to the matter but has a substantial interest in outcome of the matter and the interest of the intervenor is not adequately represented by a party, or other good cause exists; and

(b) Any representative of the intervenor meets the requirements of WAC 246-11-070.

(3) A person shall not be allowed to intervene if that person had notice of the board's decision and, upon timely application, would have been able to appear as a party in the matter in which intervention is sought, but failed to make such timely application.

(4) If intervention is granted, the intervenor shall be subject to these rules on the same basis as the other parties to the proceeding, unless otherwise limited in the order granting intervention.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-180, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-180, filed 3/24/93, effective 4/24/93.]

WAC 246-11-190 Form of pleadings and orders. (1) Pleadings, orders, and other papers filed, served, or entered under this chapter shall be:

(2003 Ed.)

(a) Captioned with the name of the state of Washington, the name of the board, and the title and cause number, if any, of the proceeding; and

(b) Signed by the person filing, serving, or entering the document. When that person is an attorney representing a party, the signature block shall include the attorney's Washington State Bar Association number.

(2) All orders shall comply with RCW 34.05.461 and the requirements of this chapter.

[Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-190, filed 3/24/93, effective 4/24/93.]

WAC 246-11-200 Notice to limited-English-speaking parties. When the program or the adjudicative clerk office is notified or otherwise made aware that a limited-English-speaking person is a party in an adjudicative proceeding, all notices concerning the hearing, including notices of hearing, continuance, and dismissal, shall either be in the primary language of the party or shall include a notice in the primary language of the party which describes the significance of the notice and how the party may receive assistance in understanding and, if necessary, responding to the notice.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-200, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 34.05.220, 93-08-003 (Order 347), § 246-11-200, filed 3/24/93, effective 4/24/93.]

WAC 246-11-210 Interpreters. (1) A "hearing impaired person" means a person who, because of a hearing impairment or speech defect cannot readily understand or communicate in spoken language. A "hearing impaired person" includes a person who is deaf, deaf and blind, or hard of hearing.

(2) A "limited-English-speaking person" means a person who because of a non-English speaking cultural background cannot readily speak or understand the English language.

(3) If a hearing impaired person or a limited-English-speaking person is involved in an adjudicative proceeding and a need for an interpreter is made known to the adjudicative clerk office, the presiding officer shall appoint an interpreter who is acceptable to the parties or, if the parties are unable to agree on an interpreter, the presiding officer shall select and appoint an interpreter.

(4) Before beginning to interpret, an interpreter shall take an oath or make affirmation that:

(a) A true interpretation shall be made to the impaired person of all the proceedings in a language or in a manner the impaired person understands; and

(b) The interpreter shall repeat the statements of the impaired person to the presiding officer, in the English language, to the best of the interpreter's skill and judgment.

(5) When an interpreter is used in a proceeding:

(a) The interpreter shall translate all statements made by other participants in the proceeding;

(b) The presiding officer shall ensure sufficient extra time is provided to permit translation; and

(c) The presiding officer shall ensure that the interpreter translates the entire proceeding to the hearing impaired person or limited-English-speaking person to the extent that the

person has the same opportunity to understand the statements made as would a person not requiring an interpreter.

(6) An interpreter appointed under this section shall be entitled to a reasonable fee for services, including waiting time and reimbursement for actual necessary travel expenses. The program shall pay the interpreter fee and expenses incurred for interpreters for license holders, applicants, or recipients of benefits. The party on whose behalf a witness requiring an interpreter appears shall pay for interpreter services for that witness.

(7) All proceedings shall be conducted consistent with chapters 2.42 and 2.43 RCW.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-210, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 34.05.220, 93-08-003 (Order 347), § 246-11-210, filed 3/24/93, effective 4/24/93.]

WAC 246-11-220 Subpoenas. (1) The board, through the presiding officer, or other designated person, and attorneys for parties may issue subpoenas to residents of the state of Washington, to license holders and applicants for license, and to other persons or entities subject to jurisdiction under RCW 4.28.185.

(2) The presiding officer shall issue subpoenas pursuant to RCW 34.05.446(1) for parties not represented by counsel upon request of the party and upon a showing of relevance and reasonable scope of the testimony or evidence sought. Requests for issuance of subpoenas must be made in writing to the presiding officer stating the relevance and the scope of testimony or evidence sought.

(3) The person on whose behalf the subpoena is issued shall pay any witness fees and expenses as provided in WAC 246-11-140 or costs for interpreters for such witnesses as provided in WAC 246-11-210.

(4) Attendance of persons subpoenaed and production of evidence may be required at any designated place in the state of Washington.

(5) Every subpoena shall:

(a) Comply with WAC 246-11-190;

(b) Identify the party causing issuance of the subpoena;

(c) State the title of the proceeding; and

(d) Command the person to whom the subpoena is directed to attend and give testimony and/or produce designated items under the person's control at a specified time and place.

(6) A subpoena may be served by any suitable person eighteen years of age or older by:

(a) Giving a copy to the person to whom the subpoena is addressed;

(b) Leaving a copy at the residence of the person to whom the subpoena is addressed with a person of suitable age and discretion;

(c) Sending a copy by mail to the current address on file with the program if the person is licensed by the board or has filed an application for a license with the board; or

(d) Sending a copy by certified mail with proof of receipt if the person is neither licensed by nor has applied for a license with the board.

(7) Proof of service may be made by:

(a) Affidavit of personal service;

(b) Certification by the person mailing the subpoena to a license holder or applicant; or

(c) Return or acknowledgment showing receipt by the person subpoenaed or his/her representative. Any person accepting certified or registered mail at the last known address of the person subpoenaed shall be considered an authorized representative.

(8) The presiding officer, upon motion made promptly and before the time specified for compliance in the subpoena, may:

(a) Quash or modify the subpoena if the subpoena is unreasonable or requires evidence not relevant to any matter at issue; or

(b) Condition denial of the motion upon just and reasonable conditions, including advancement of the reasonable cost by the person on whose behalf the subpoena is issued of producing the books, documents, or tangible things; or

(c) Issue a protective order under RCW 34.05.446.

(9) The board may seek enforcement of a subpoena under RCW 34.05.588(1) or proceed in default pursuant to WAC 246-11-280.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-220, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 4.24.240, 4.24.250 and 4.24.260. 93-08-003 (Order 347), § 246-11-220, filed 3/24/93, effective 4/24/93.]

WAC 246-11-230 Presiding officer and panel members. (1) The board may appoint one or more persons as presiding officer for brief adjudicative proceedings as provided in WAC 246-11-430(1).

(2) The board shall authorize one of the following to serve as presiding officer for adjudicative proceedings:

(a) A board member; or

(b) An individual appointed pursuant to RCW 18.130.095(3); or

(c) An administrative law judge employed by the office of administrative hearings.

(3) The board may designate certain of its members to hear a matter as a hearing panel as provided by law.

(4) Any party may move to disqualify the presiding officer, or a member of the board hearing the matter, as provided in RCW 34.05.425(3).

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-230, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-230, filed 3/24/93, effective 4/24/93.]

SECTION II INITIATING ACTIONS

WAC 246-11-250 Form and content of initiating documents. (1) Initiating documents shall include a clear and concise statement of the:

(a) Identity and authority of the person issuing the document;

(b) Factual basis for the action or proposed action set forth in the document;

(c) Statutes and rules alleged to be at issue;

(d) Identity of the party against whom the action is taken or proposed to be taken;

[Title 246 WAC—p. 86]

(e) Action or proposed action or penalties, including the statutory or rule authority for those actions or penalties;

(f) Signature of the person issuing the document and the date signed; and

(g) Method by which an adjudicative proceeding may be requested.

(2) Initiating documents shall be accompanied by the following documents:

(a) Notice that the respondent may defend against the action or proposed action; and

(b) Form for requesting adjudicative proceeding.

(3) Initiating documents shall be served as described in WAC 246-11-080.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-250, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.220. 93-08-003 (Order 347), § 246-11-250, filed 3/24/93, effective 4/24/93.]

WAC 246-11-260 Amendment of initiating documents. (1) Prior to the hearing date, initiating documents may be amended subject to the following conditions:

(a) Amended initiating documents shall meet the requirements of WAC 246-11-250(1);

(b) Amended initiating documents shall be accompanied by the documents described in WAC 246-11-250(2);

(c) Whenever amended initiating documents are issued, a new interval for response will begin, as described in WAC 246-11-270, unless the respondent requests the time periods set by the original initiating document; and

(d) Issuance of amended initiating documents ends all obligations of the parties under the prior initiating documents.

(2) On the hearing date, the initiating documents may be amended subject to the following conditions:

(a) The documents may be amended upon motion of the state;

(b) The documents may not be amended without the approval of the presiding officer; and

(c) Upon motion of a party or upon his/her own initiative, the presiding officer may grant a continuance on all or part of the matter if necessary to afford the respondent an opportunity to prepare a defense to the amended documents.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-260, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.220. 93-08-003 (Order 347), § 246-11-260, filed 3/24/93, effective 4/24/93.]

WAC 246-11-270 Request for adjudicative proceeding. A respondent may respond to an initiating document by filing an application for an adjudicative proceeding or by waiving the opportunity for adjudicative proceeding.

(1) If the respondent wishes to file an application for an adjudicative proceeding:

(a) An application for adjudicative proceeding must be filed in accordance with the following time periods:

(i) For matters under chapter 18.130 RCW, the Uniform Disciplinary Act, within twenty days of service of the initiating documents unless an extension has been granted as provided in subsection (3) of this section; and

(ii) For all other matters, within twenty days of service of the initiating documents, unless otherwise provided by statute.

(b) The application for adjudicative proceeding shall be made on the Request for Adjudicative Proceeding form accompanying the initiating documents or by a written document including substantially the same information.

(c) By filing a request for adjudicative proceeding, the responding party agrees to appear personally at the adjudicative proceeding or, if otherwise approved by the presiding officer, by telephone, unless appearance is waived as authorized in WAC 246-11-130(4).

(d) The application for adjudicative proceeding shall contain a response to the initiating documents, indicating whether each charge is admitted, denied or not contested, and responses shall be subject to the following conditions:

(i) Once admitted or not contested, an allegation may not be denied; and

(ii) An allegation denied or not contested may later be admitted.

(e) When an allegation is admitted or not contested, it shall be conclusively deemed to be true for all further proceedings. No proof of the allegation need be submitted.

(f) The application for adjudicative proceeding shall specify the representative, if any, designated pursuant to WAC 246-11-070 and any request for interpreter. The responding party shall amend the name of the representative and need for interpreter immediately if circumstances change prior to the hearing.

(g) The application for adjudicative proceeding shall be filed at the adjudicative clerk office.

(2) A respondent may waive an adjudicative proceeding and submit a written statement and other documents in defense or in mitigation of the charges. Such waiver and documents shall be filed:

(a) In accordance with the timelines in subsection (1)(a) of this section; and

(b) At the address indicated in subsection (1)(g) of this section.

(3) For matters under RCW 18.130.180, if the twenty-day limit for filing an application for adjudicative proceeding results in a hardship to the respondent, the respondent may request an extension of not more than sixty days upon a showing of good cause.

(a) The request for extension shall be filed within the twenty-day limit and shall include:

(i) The reason for the request and the number of days for which the extension is requested; and

(ii) Documentation of the circumstances creating the hardship.

(b) The request shall be granted for a period not to exceed sixty days upon showing of:

(i) Illness of the respondent; or

(ii) Absence of the respondent from the county of residence or employment; or

(iii) Emergency in the respondent's family; or

(iv) Other good cause as determined by the presiding officer.

(c) If a request for extension is denied, the respondent shall have ten days from service of the order denying the

(2003 Ed.)

extension or twenty days from service of the initiating documents, whichever is longer, to file an application for adjudicative proceeding.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-270, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-270, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.220, 93-08-003 (Order 347), § 246-11-270, filed 3/24/93, effective 4/24/93.]

WAC 246-11-280 Default. (1) If a party fails to respond to initiating documents according to WAC 246-11-270, that party will be deemed to have waived the right to a hearing, and the board shall enter a final order without further contact with that party.

(2) If a party requests an adjudicative proceeding but fails to appear, without leave to do so, at a scheduled prehearing conference, the presiding officer may issue an order of default. The order shall include notice of opportunity to request that the default order be vacated pursuant to RCW 34.05.440(3). Unless vacated, a default order under this subsection shall be grounds for the board to proceed to decide the matter in the absence of the respondent and without additional notice to the respondent and to issue a final order.

(3) If a party requests an adjudicative proceeding but fails to appear at the hearing, the presiding officer may issue an order of default in the same manner as subsection (2) of this section, or may proceed to hear the matter in the absence of the party and issue a final order.

(4) Final orders entered under this section shall contain:

(a) Findings of fact and conclusions of law based upon prima facie proof of the allegations contained in the initiating documents;

(b) Proof of service of or a good faith attempt to serve initiating documents and appropriate notices;

(c) A finding that there is no reason to believe that the party in default is in active military service;

(d) The penalties or conditions imposed by the order; and

(e) Notice of the opportunity to request reconsideration pursuant to RCW 34.05.470.

(5) Final and default orders entered under this section shall be served upon the parties in accordance with WAC 246-11-080.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-280, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 34.05.220, 34.05.440 and 34.05.470, 93-08-003 (Order 347), § 246-11-280, filed 3/24/93, effective 4/24/93.]

WAC 246-11-290 Scheduling orders. (1) Within thirty days after receipt of the application for adjudicative proceeding, the board or designee thereof, shall:

(a) Approve the application for full adjudicative procedure and issue and serve on the parties a scheduling order or other scheduling mechanism establishing timelines for discovery, settlement, and scheduled hearings; or

(b) Approve the application for a brief adjudicative procedure and issue and serve a notice of the date by which any additional written materials are to be submitted for consideration; or

(c) Deny the application according to RCW 34.05.416.

(2) If a scheduling order is issued:

(a) The scheduling order shall specify:

(i) The date, time, and place of a settlement conference, a prehearing conference, and the hearing;

(ii) The deadlines for completion of discovery and submission of prehearing motions; and

(iii) The name, address, and telephone number of the assistant attorney general or other department representative who will represent the state in the matter.

(b) The scheduling order may be modified by order of the presiding officer upon his/her own initiative or upon motion of a party. Any request for change of the scheduling mechanism or order shall be made by motion as provided in WAC 246-11-380.

(c) The presiding officer may waive establishing dates for the settlement conference, completion of discovery, submission of prehearing motions, and the prehearing conference, if, in the discretion of the presiding officer, those proceedings are not necessary or appropriate in a particular matter or type of case. However, either party may request by motion to the presiding officer that any or all of the dates be set.

(d) Dates contained in the scheduling order may be changed by the adjudicative clerk office upon written request of either party made within fifteen days of issuance of the first scheduling order. All other changes must be made by motion pursuant to WAC 246-11-380.

[Statutory Authority: RCW 18.155.040. 97-13-015, § 246-11-290, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-290, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.419. 93-08-003 (Order 347), § 246-11-290, filed 3/24/93, effective 4/24/93.]

SECTION III EMERGENCY ADJUDICATIVE PROCEEDINGS

WAC 246-11-300 Conduct of emergency adjudicative proceedings. (1) Summary action may be taken only after a review by the board of such evidence, including affidavits, if appropriate, to establish:

(a) The existence of an immediate danger to the public health, safety, or welfare;

(b) The board's ability to address the danger through a summary action, and

(c) The summary action necessary to address the danger.

(2) No notice to any person potentially affected by a summary action shall be required prior to issuance of a summary action.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-300, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 34.05.422 and 34.05.479. 93-08-003 (Order 347), § 246-11-300, filed 3/24/93, effective 4/24/93.]

WAC 246-11-310 Effect of summary action. (1) Summary action takes effect upon entry of the order.

(2) No person shall be required to comply with a summary action until service has been made or the person has knowledge of the order, whichever occurs first.

(3) A summary action shall be served as promptly as practicable, in accordance with WAC 246-11-080.

(4) A summary action shall not be subject to the post hearing process provided in WAC 246-11-550 through 246-

11-610, but a summary action may be appealed to superior court as provided by law.

[Statutory Authority: RCW 18.130.050(1), 34.05.422 and 34.05.479. 93-08-003 (Order 347), § 246-11-310, filed 3/24/93, effective 4/24/93.]

WAC 246-11-320 Form and content of summary actions. (1) A summary action shall be entered in the form of an order containing findings of fact, conclusions of law, and the summary action imposed, as well as a statement of policy reasons for the decision.

(2) A summary action imposed by emergency adjudicative proceeding shall be limited to those actions necessary to alleviate an immediate danger to the public health, safety, or welfare.

(3) Initiating documents, and all other documents required by WAC 246-11-250 shall accompany a summary action order when served.

[Statutory Authority: RCW 18.130.050(1), 34.05.473 and 34.05.479. 93-08-003 (Order 347), § 246-11-320, filed 3/24/93, effective 4/24/93.]

WAC 246-11-330 Adjudicative proceedings upon summary action. Following summary action taken by the board, the respondent may:

(1) Request a prompt adjudicative proceeding conducted in accordance with this chapter; or

(2) Waive the prompt adjudicative proceeding and request a regularly scheduled adjudicative proceeding conducted in accordance with this chapter;

(3) Waive the right to an adjudicative proceeding and submit a written statement to be considered prior to the entry of the final order; or

(4) Waive the opportunity to be heard.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-330, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.479. 93-08-003 (Order 347), § 246-11-330, filed 3/24/93, effective 4/24/93.]

WAC 246-11-340 Opportunity for prompt adjudicative proceeding. (1) Any respondent affected by a summary action shall be provided the opportunity to request a prompt adjudicative proceeding. Notice of the opportunity shall be provided in the notice of opportunity to defend against the allegations that are the basis for the summary action. The form for requesting an adjudicative proceeding shall include the option of requesting a prompt adjudicative proceeding.

(2) Any respondent affected by a summary action may request an prompt adjudicative proceeding, may elect a regularly scheduled adjudicative proceeding instead of a prompt adjudicative proceeding, or may waive the opportunity for adjudicative proceeding in accord with WAC 246-11-270.

(3) Any request for a prompt adjudicative proceeding must be filed within ten days of the service of the summary action.

(4) If requested by the respondent, a prompt adjudicative proceeding shall be conducted within twenty days of service of a summary action.

(5) Regardless whether a prompt adjudicative proceeding is requested, the matter shall be resolved as quickly as feasible in accordance with all other applicable rules.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-340, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.479. 93-08-003 (Order 347), § 246-11-340, filed 3/24/93, effective 4/24/93.]

WAC 246-11-350 Proceedings prior to prompt adjudicative proceeding. A settlement conference may be requested, a settlement may be offered, and a prehearing conference may be conducted prior to a prompt adjudicative proceeding. Prehearing proceedings shall not delay a prompt adjudicative proceeding except by mutual agreement of the parties.

[Statutory Authority: RCW 18.130.050(1) and 34.05.479. 93-08-003 (Order 347), § 246-11-350, filed 3/24/93, effective 4/24/93.]

SECTION IV SETTLEMENT AND PREHEARING PROCEEDINGS

WAC 246-11-360 Settlement conference. (1) Following a request for an adjudicative proceeding, a settlement conference shall be conducted if provided in the scheduling order. If another scheduling mechanism is issued, a settlement conference may be scheduled and held at the discretion of the board or other settlement processes may be utilized at the discretion of the board.

(2) The purpose of the settlement conference or other settlement process shall be to attempt to reach agreement on the issues and on a proposed order to be entered. Any agreement of the parties is subject to final approval by the board.

(3) The respondent shall attend the settlement conference as scheduled and may also be represented as provided in WAC 246-11-070. Representatives of the board and/or department will also attend. Other persons may attend by agreement of the parties.

(4) Either party may bring documents or other materials to the settlement conference for the purpose of settlement negotiations. No testimony will be taken. No documents or information submitted at the settlement conference will be admitted at the adjudicative proceeding unless stipulated by the parties or otherwise admitted into evidence by the presiding officer.

(5) If a settlement offer has been made in writing to the respondent and it is signed and returned by the respondent to the board prior to the settlement conference, all subsequent dates set in the scheduling order or other scheduling mechanism are continued pending final review of the settlement by the board.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-360, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-360, filed 3/24/93, effective 4/24/93.]

WAC 246-11-370 Discovery. The parties are encouraged to exchange information and documents related to the case prior to the adjudicative proceeding. Formal discovery is obtained as follows:

(1) Methods, scope and limits:

(a) Parties may obtain discovery by production of records or things; deposition upon oral examination; requests for admission; or, if ordered by the presiding officer, written interrogatories.

(2003 Ed.)

(b) Unless otherwise limited by order of the presiding officer in accord with these rules, the scope of discovery shall be as follows:

(i) Parties may obtain discovery regarding any matter not privileged, which is relevant to the subject matter in the pending action. It is not grounds for objection that the information sought will be inadmissible at the adjudicative proceeding if the information sought appears reasonably calculated to lead to the discovery of admissible evidence.

(ii) The frequency or extent of use of the discovery methods set forth in these rules shall be limited by the presiding officer if the presiding officer determines that:

(A) The discovery sought is unreasonably cumulative or duplicative, or is obtainable from another source that is more convenient, less burdensome, or less expensive; or

(B) The party seeking discovery has had an ample opportunity by discovery to obtain the information sought; or

(C) The discovery is unduly burdensome or expensive, taking into account the needs of the case, limitations of the parties' resources, and the importance of the issues at stake.

(iii) The presiding officer may limit discovery upon his or her own initiative after reasonable notice or pursuant to a motion submitted by a party.

(2) Production of records, documents, or things:

(a) Upon written request of a party the opposing party shall identify experts and other witnesses to be called at the hearing and shall provide other information necessary to enable the party to conduct depositions of the witnesses.

(b) Any party may serve on any other party a request, which must be signed by the party or designated representative:

(i) To produce and permit the party making the request or designee to inspect and copy any designated documents, or to inspect and copy, test, or sample any tangible things which constitute or contain matters within the scope of discovery and which are in the possession, custody or control of the party upon whom the request is served; or

(ii) To permit entry onto designated land or other property which is in the possession or control of the party upon whom the request is served for the purpose of inspection, measuring, surveying, photographing, testing or sampling the property or designated object or operation thereon which is within the scope of discovery.

(c) Any party who produces documents for inspection shall produce them as they are kept in the usual course of business or may, if the parties agree, organize and label them to correspond with the categories in the request.

(d) The party upon whom a request is made may, by motion to the presiding officer, move for an order denying the request to produce or modify the conditions of the request. Denial of the request of change in the conditions of the request shall be within the discretion of the presiding officer and shall be made by written order.

(3) Depositions may be taken subject to the following conditions:

(a) Within the United States or a territory or insular possession subject to the dominion of the United States, depositions shall be taken before an officer authorized to administer oaths by the state of Washington or of the place where the examination is held. A presiding officer may, in his or her

discretion or following motion of a party, preside at the deposition. Within a foreign country, depositions shall be taken before a secretary of an embassy or legation, consul general, vice-consul or consular agent of the United States, or a person designated by the presiding officer or agreed upon by the parties by stipulation in writing filed with the presiding officer, if any, and otherwise with the disciplining authority. Except by stipulation, no deposition shall be taken before any person who is a party or a privy of a party, or a privy of a representative of a party, or who is financially interested in the proceeding.

(b) A party desiring to take the deposition of a person upon oral examination shall give reasonable notice of not less than five days in writing to the person to be deposed and to the opposing party. The notice shall state the time and place for taking the deposition, the name and address of each person to be examined, if known, and if the name is not known, a description sufficient to identify the person to be examined or the particular class or group to which the person to be examined belongs. On motion of a party upon whom the notice is served, the presiding officer may for cause shown, lengthen or shorten the time.

(c) After notice is served for taking a deposition, or upon motion of the presiding officer, or upon motion reasonably made by any party or by the person to be examined, and upon notice and for good cause, the presiding officer may issue an order that the deposition shall not be taken or that it be taken subject to specified restrictions, conditions, or limitations.

(d) Depositions shall be recorded.

(i) The officer before whom the deposition is taken shall put the witness on oath or affirmation and shall personally or by someone acting under the officer's direction and in the officer's presence, record the testimony.

(ii) The officer or person acting under the officer's direction shall transcribe the testimony at the request of any party, provided that any expenses shall be paid by the requesting party.

(iii) The transcribed testimony shall be submitted to the person deposed for review and signature, unless review and signature are waived by that person. The officer shall append to the transcript any changes in form or substance that may be submitted by the parties.

(iv) Copies of the transcribed and, unless review and signature has been waived, signed testimony shall be served upon the person deposed and upon the parties.

(e) If the parties so stipulate in writing or on the record, depositions may be taken before any person, at any time or place, upon any notice, and in any manner and when so taken, may be used as any other deposition.

(4) Following motion of a party and opportunity for response by the opposing party, the presiding officer may order a party to respond to written interrogatories and may order that the interrogatories be subject to specified restriction, condition, or limitation.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-370, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-370, filed 3/24/93, effective 4/24/93.]

[Title 246 WAC—p. 90]

WAC 246-11-380 Motions. (1) The presiding officer shall rule on motions. The presiding officer may rule on motions without oral argument or may request or permit the parties to argue the motion in person or by telephone. Oral argument may be limited in time at the discretion of the presiding officer.

(2) All prehearing motions, including discovery and evidentiary motions, shall be made in writing and filed prior to the dates set in the scheduling order. Filing shall be at the adjudicative clerk office, unless filing is directed in writing to be made at another address.

(3) Motions for continuance must be made in writing and filed prior to the dates set in the scheduling order. If the adjudicative proceeding is scheduled to take place fewer than twenty days from service of the scheduling order, motions for continuance must be made within ten days of service of the scheduling order, but in no event fewer than five days prior to the hearing. Continuances may be granted by the presiding officer for good cause.

(4) The presiding officer may grant a continuance when a motion for continuance is not submitted within the time limits contained in subsection (3) of this section for good cause.

(5) The following is the recommended format for motions:

(a) A succinct statement of the facts contended to be material;

(b) A concise statement of the issue, issues or law upon which the presiding officer is requested to rule;

(c) The specific relief requested by the moving party;

(d) If the motion requires the consideration of facts or evidence not appearing on the record, the moving party shall also serve and file copies of all affidavits and photographic or documentary evidence presented in support of the motion;

(e) The legal authority upon which the motion is based; and

(f) A proposed order may accompany the motion, and should contain findings of fact and conclusions of law.

(6) The moving party shall file the motion, and the accompanying affidavits and photographic or documentary evidence when necessary, with the board's office and with the presiding officer, and shall serve the motion, and the accompanying affidavits and photographic or documentary evidence when necessary, on all other parties.

(7) The opposing party shall file with the adjudicative clerk office, and serve upon the moving party, a responsive memorandum, and accompanying affidavits and photographic or documentary evidence when necessary, no later than eleven days following service of the motion, unless otherwise ordered by the presiding officer.

(8) The moving party may file with the adjudicative clerk office, and serve upon the opposing party, a reply memorandum no later than five days following service of the responsive memorandum, unless otherwise ordered by the presiding officer.

(9) Unless otherwise ordered by the presiding officer, all motions shall be decided without oral argument. A party requesting oral argument on a motion shall so indicate by typing "ORAL ARGUMENT REQUESTED" in the caption of the motion or the responsive memorandum. If a request for oral

(2003 Ed.)

argument is granted, the presiding officer shall notify the parties of the date and time of the argument and whether the argument will be in person or by telephone conference.

(10) Motions to shorten time or emergency motions shall be exceptions to the rule, and a party may only make such motions in exigent or exceptional circumstances. When making such a motion, the moving party shall:

(a) Suggest a date and time when the moving party seeks to have the presiding officer hear the motion to shorten time, which should be at least forty-eight hours after filing;

(b) Suggest a date and time when the moving party seeks to have the presiding officer consider the merits of the underlying motion;

(c) Describe the exigent or exceptional circumstances justifying shortening of time in an affidavit or a memorandum accompanying the motion;

(d) Certify that the motion to shorten time and the underlying motion have been served on all other parties prior to the filing of the motion with the presiding officer. Any opposition to the motion to shorten time must be served and filed within twenty-four hours of the service of the motion. If the presiding officer grants the motion to shorten time, the presiding officer shall notify the parties of the date by which the responsive memorandum to the underlying motion shall be served and filed.

(11) All motions will be decided as soon as practical, but not more than thirty days following the filing of the motion. If the presiding officer will not decide the motion within this time, the presiding officer shall notify the parties in writing of the date by which the motion will be decided.

(12) If a party serves a motion or responsive memorandum by mail, pursuant to WAC 246-11-080, then three days shall be added to the time within which the opposing party must file and serve the responsive or reply memorandum. Service by electronic telefacsimile transmission (FAX) upon each party is permitted upon agreement of the parties, with proof of confirmation of service to be filed with the presiding officer.

(13) All computations of time shall be calculated pursuant to WAC 246-11-040.

(14) Departmental motions for summary actions are exempted from all requirements of this section.

[Statutory Authority: RCW 18.155.040. 97-13-015, § 246-11-380, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-11-380, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-380, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-380, filed 3/24/93, effective 4/24/93.]

WAC 246-11-390 Prehearing conference. (1) If a scheduling order is issued, the parties shall be notified of the time and place of the first prehearing conference in the scheduling order. If another scheduling mechanism is issued, a prehearing conference will be held upon motion of either party, unless board policy provides otherwise.

(2) The presiding officer shall determine whether the prehearing conferences will be conducted in person or by telephone conference call.

(3) The presiding officer shall conduct the prehearing conference and shall issue rulings related to prehearing

motions and evidentiary issues. The rulings shall govern the conduct of subsequent proceedings.

(4) The prehearing conference may be recorded as ordered by the presiding officer. All offers of proof and objections concerning matters raised at the prehearing conference must be made on the record at the prehearing conference.

(5) Following the final prehearing conference, the presiding officer shall issue a written prehearing order which will:

(a) Identify the issues to be considered at the hearing and indicate which party has the burden of proof on these issues;

(b) Specify the facts which are admitted or not contested by the parties;

(c) Identify those documents and exhibits that will be admitted at hearing and those which may be distributed prior to hearing;

(d) Identify expert and lay witnesses that may be called at hearing and the issues to which those witnesses may testify;

(e) Rule on motions;

(f) Accept amendments to the pleadings;

(g) Address such other issues or matters as may be reasonably anticipated to arise and which may aid in the disposition of the proceedings; and

(h) Rule on objections made in any preserved testimony.

(6) Following the prehearing conference, the presiding officer may issue an order directing that the matter be heard as a brief adjudicative proceeding, pursuant to WAC 246-11-420 through 246-11-450.

(7) Documentary evidence not offered in the prehearing conference shall not be received into evidence at the adjudicative proceeding in the absence of a clear showing that the offering party had good cause for failing to produce the evidence at the prehearing conference.

(8) Witnesses not identified during the prehearing conference shall not be allowed to testify at the adjudicative proceeding in the absence of a clear showing that the party offering the testimony of such witness had good cause for failing to identify the witness at the prehearing conference.

(9) If the authenticity of documents submitted at the prehearing conference is not challenged at the prehearing conference, the documents shall be deemed authentic. However, a party shall be permitted to challenge such authenticity at a later time upon a clear showing of good cause for failure to object at the prehearing conference.

(10) Nothing in these rules shall prohibit the presiding officer from conducting a conference at any time, including during the hearing. The presiding officer shall state on the record the results of such conference.

(11) A party bound by a stipulation or admission of record may withdraw it in whole or in part only upon a determination by the presiding officer or hearing officer that:

(a) The stipulation or admission was made inadvertently or as a bona fide mistake of fact or law; and

(b) The withdrawal will not unjustly prejudice the rights of the other parties.

(12) In an appeal to superior court involving issues addressed in the prehearing order, the record of the prehearing conference, written motions and responses the prehearing

order and any orders issued by the presiding officer pursuant to WAC 246-11-380, shall be the record.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-390, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-390, filed 3/24/93, effective 4/24/93.]

WAC 246-11-400 Protective orders. The presiding officer may issue a protective order at his or her discretion:

- (1) To protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense;
- (2) To preserve confidentiality related to health care records or provider-client information;
- (3) To protect examination processes;
- (4) To protect the identity of a person supplying information to the department or board where the person indicates a desire for nondisclosure unless that person testifies or has been called to testify at an adjudicative proceeding; or
- (5) To comply with applicable state or federal law.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-400, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.446. 93-08-003 (Order 347), § 246-11-400, filed 3/24/93, effective 4/24/93.]

SECTION V BRIEF ADJUDICATIVE PROCEEDINGS

WAC 246-11-420 Application of brief adjudicative proceedings. (1) If an adjudicative proceeding is requested, a brief adjudicative proceeding will be conducted where the matter involves one or more of the following:

- (a) A determination whether an applicant for a license meets the minimum criteria for an unrestricted license and the board proposes to deny such a license or to issue a restricted license;
- (b) A determination whether a person is in compliance with the terms and conditions of a final order previously issued by the board;
- (c) Any approval of a school or curriculum when such approval by the board is required by statute or rule; and
- (d) A determination whether a license holder requesting renewal has submitted all required information and meets minimum criteria for renewal.

(2) If an adjudicative proceeding is requested in a matter not listed in subsection (1) of this section, a brief adjudicative proceeding may be conducted in the discretion of the presiding officer when it appears that:

- (a) Only legal issues exist; or
- (b) Both parties have agreed to a brief proceeding; and
- (c) The protection of the public interest does not require that the board provide notice and an opportunity to participate to persons other than the parties.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-420, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.482. 93-08-003 (Order 347), § 246-11-420, filed 3/24/93, effective 4/24/93.]

WAC 246-11-425 Preliminary record in brief adjudicative proceedings. (1) The preliminary record with respect to an application for a license or for approval of a school or curriculum shall consist of:

(a) The application for the license or approval and all associated documents;

(b) All documents relied upon by the program in proposing to deny the application; and

(c) All correspondence between the applicant for license or approval and the program regarding the application.

(2) The preliminary record with respect to determination of compliance with a previously issued final order shall consist of:

(a) The previously issued final order;

(b) All reports or other documents submitted by the license holder, or at the direction of the license holder, in full or partial fulfillment of the terms of the final order; and

(c) All correspondence between the license holder and the program regarding compliance with the final order.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-425, filed 1/31/94, effective 3/3/94.]

WAC 246-11-430 Conduct of brief adjudicative proceedings. (1) Brief adjudicative proceedings shall be conducted by a presiding officer for brief adjudicative proceedings designated by the board. The presiding officer for brief adjudicative proceedings shall have agency expertise in the subject matter but shall not have personally participated in the decision to issue the initiating document.

(2) The parties or their representatives may present written documentation. The presiding officer for brief adjudicative proceedings shall designate the date by which written documents must be submitted by the parties.

(3) The presiding officer for brief adjudicative proceedings may, in his or her discretion, entertain oral argument from the parties or their representatives.

(4) No witnesses may appear to testify.

(5) In addition to the record, the presiding officer for brief adjudicative proceedings may employ agency expertise as a basis for decision.

(6) The presiding officer for brief adjudicative proceedings shall not issue an oral order. Within ten days of the final date for submission of materials or oral argument, if any, the presiding officer for brief adjudicative proceedings shall enter an initial order in accordance with WAC 246-11-540.

[Statutory Authority: RCW 18.130.050 and 43.70.040. 96-21-027, § 246-11-430, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-430, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-430, filed 3/24/93, effective 4/24/93.]

WAC 246-11-440 Effectiveness of orders on brief adjudicative proceedings. (1) Initial orders on brief adjudicative proceedings shall become final twenty-one days after service of the initial order unless:

(a) Administrative review has been requested pursuant to WAC 246-11-550; or

(b) On its own initiative, the board determines to review the matter and, within twenty-one days of service of the initial order, provides notice to the parties of the date by which a determination shall be made.

(2) If review is taken under subsection (1) of this section, each party shall be provided an opportunity to state its view of the matter, and a written order containing findings of fact,

conclusions of law, and order shall be entered and served upon the parties within twenty days of service of the initial order or the request for review, whichever is later.

(3) A request for review is deemed to be denied if the board does not act on the request within twenty days after the request is submitted.

(4) If administrative review is taken under subsection (1) of this section, the presiding officer may convert the matter to a full adjudicative proceeding.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-440, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 34.05.455, 34.05.485, 34.05.488 and 34.05.491. 93-08-003 (Order 347), § 246-11-440, filed 3/24/93, effective 4/24/93.]

WAC 246-11-450 Agency record in brief proceedings. The agency record of brief adjudicative proceedings shall consist of:

- (1) The preliminary record as set forth in WAC 246-11-425;
- (2) All initiating documents including the notice of opportunity to defend;
- (3) The request for adjudicative proceeding;
- (4) All documents submitted in the proceeding;
- (5) Any transcript or recording of any testimony or arguments presented; and
- (6) All orders issued in the case.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-450, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.494. 93-08-003 (Order 347), § 246-11-450, filed 3/24/93, effective 4/24/93.]

SECTION VI HEARING

WAC 246-11-470 Notice of adjudicative proceeding. Notice of an adjudicative proceeding shall be issued pursuant to RCW 34.05.434.

[Statutory Authority: RCW 18.130.050(1) and 34.05.434. 93-08-003 (Order 347), § 246-11-470, filed 3/24/93, effective 4/24/93.]

WAC 246-11-480 Conduct of adjudicative proceeding. (1) The adjudicative proceeding shall be conducted as provided in RCW 34.05.449 through 34.05.455.

(2) The presiding officer may take the following actions to the extent not already determined in a prehearing order:

- (a) Conduct the hearing de novo;
- (b) Determine the order of presentation of evidence;
- (c) Administer oaths and affirmations;
- (d) Issue subpoenas;
- (e) Rule on procedural matters, objections, motions, and offers of proof;
- (f) Receive relevant evidence;
- (g) Interrogate witnesses called by the parties in an impartial manner to develop any facts necessary to fairly and adequately decide the matter;
- (h) Call additional witnesses and request additional exhibits deemed necessary to complete the record and receive such evidence subject to full opportunity for cross-examination and rebuttal by all parties;

(2003 Ed.)

(i) Take any appropriate action necessary to maintain order during the adjudicative proceeding;

(j) Determine whether to permit or require oral argument or briefs and determine the time limits for submission thereof;

(k) Permit photographic and recording equipment at hearing subject to conditions necessary to preserve confidentiality and prevent disruption;

(l) Permit a person to waive any right conferred upon that person by chapter 34.05 RCW or this chapter, except as precluded by law; and

(m) Take any other action necessary and authorized by applicable law or rule.

(3) The presiding officer shall:

(a) Apply as the first source of law governing an issue those statutes and rules deemed applicable to the issue;

(b) If there is no statute or rule governing the issue, resolve the issue on the basis of the best legal authority and reasoning available, including that found in federal and Washington Constitutions, statutes, rules, and court decisions; and

(c) Not declare any statute or rule invalid.

(4) If the validity of any statute or rule is raised as an issue, the presiding officer may permit arguments to be made on the record concerning the issue for the purpose of subsequent review.

(5) Members of the board hearing the matter may ask questions of any witness and may call additional witnesses.

(6) A party may move to disqualify the presiding officer or any member of the board pursuant to RCW 34.05.425(3).

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-480, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-480, filed 3/24/93, effective 4/24/93.]

WAC 246-11-490 Evidence. (1) The presiding officer shall rule on objections to the admissibility of evidence pursuant to RCW 34.05.452 unless those objections have been addressed in the prehearing order.

(2) The refusal of a witness to answer any question ruled proper shall be grounds for the presiding officer, at his/her discretion, to strike some or all prior testimony by that witness on related matters or to grant a continuance to allow a party to seek a court order to compel the witness to answer.

(3) Each person called as a witness in an adjudicative proceeding shall swear or affirm that the evidence about to be given in the adjudicative proceeding shall be the truth under the provisions of RCW 5.28.020 through 5.28.060.

[Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-490, filed 3/24/93, effective 4/24/93.]

WAC 246-11-500 Proposed order. At the conclusion of the hearing or by a date specified by the presiding officer, the presiding officer may require each party to submit to the presiding officer proposed findings of fact and conclusions of law and a proposed order.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-500, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1). 93-08-003 (Order 347), § 246-11-500, filed 3/24/93, effective 4/24/93.]

[Title 246 WAC—p. 93]

WAC 246-11-510 Issuance of final order. If the adjudicative proceeding is heard by the board or a panel of the board the presiding officer and board or panel of the board shall:

(1) Issue a final order containing findings of fact and conclusions of law and an order; and

(2) Cause the adjudicative clerk office to serve a copy of the order on each party and any designated representative of the party.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-510, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-510, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-510, filed 3/24/93, effective 4/24/93.]

WAC 246-11-520 Standard of proof. The order shall be based on the kind of evidence upon which reasonably prudent persons are accustomed to rely in the conduct of their affairs. In all cases involving an application for license the burden shall be on the applicant to establish that the application meets all applicable criteria. In all other cases the burden is on the department to prove the alleged factual basis set forth in the initiating document. Except as otherwise provided by statute, the burden in all cases is a preponderance of the evidence.

[Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-520, filed 3/24/93, effective 4/24/93.]

WAC 246-11-530 Consolidated proceedings. (1) When two or more applications for adjudicative proceeding involve a similar issue, the applications may be consolidated by the presiding officer and the hearings conducted together. The presiding officer or hearings officer may consolidate on his/her own motion or upon the request of a party.

(2) A party scheduled for a consolidated proceeding may request to withdraw from the consolidated proceeding in favor of an individual proceeding. The presiding officer may grant a motion to withdraw from a consolidated proceeding at any time when good cause is shown.

(3) Each respondent in a consolidated proceeding shall retain the right to representation.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-530, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.220, 93-08-003 (Order 347), § 246-11-530, filed 3/24/93, effective 4/24/93.]

WAC 246-11-540 Initial order. (1) If the adjudicative proceeding is not heard by the board or panel of the board the presiding officer shall:

(a) Issue an initial order containing proposed findings of fact, conclusions of law, and a proposed order;

(b) Cause the adjudicative clerk office to serve a copy of the initial order on each party and any designated representative of a party; and

(c) Forward the initial order and record of the adjudicative proceeding to the adjudicative clerk office.

(2) Initial orders on brief adjudicative proceedings shall become final orders as provided in WAC 246-11-540.

(3) Following receipt of initial orders in matters other than brief adjudicative proceedings, the board shall review

the initial order and the record as provided in RCW 34.05.-464, and issue a final order as provided in WAC 246-11-560.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-540, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3), 94-04-078, § 246-11-540, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 93-08-003 (Order 347), § 246-11-540, filed 3/24/93, effective 4/24/93.]

SECTION VII POST HEARING PROCESS

WAC 246-11-550 Appeal from initial order. (1) Any party may file a written petition for administrative review of an initial order issued under WAC 246-11-430 or 246-11-540 stating the specific grounds upon which exception is taken and the relief requested.

(2) Petitions for administrative review must be served upon the opposing party and filed with the adjudicative clerk office within twenty-one days of service of the initial order.

(3) The opposing party may file a response to a petition for administrative review as provided in this section. The response shall be filed at the place specified in subsection (2) of this section. The party filing the response shall serve a copy of the response upon the party requesting administrative review. If the initial order was entered pursuant to WAC 246-11-430, the response will be filed within ten days of service of the petition. In all other matters, the response will be filed within twenty days of service of the petition.

[Statutory Authority: RCW 18.155.040, 97-13-015, § 246-11-550, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050 and 43.70.040, 96-21-027, § 246-11-550, filed 10/7/96, effective 11/7/96. Statutory Authority: RCW 18.130.050(1) and 34.05.464, 93-08-003 (Order 347), § 246-11-550, filed 3/24/93, effective 4/24/93.]

WAC 246-11-560 Final orders. (1) The form and content of final orders shall be as follows:

(a) Final orders shall contain findings of fact, conclusions of law, and an order. All final orders shall be signed by a member of the panel of board members who heard the matter.

(b) Final orders may adopt by reference the initial order in whole or in part.

(c) Final orders may modify or revise the initial order in whole or in part.

(2) Final orders shall be served upon the parties and their representatives as provided in WAC 246-11-080.

(3) Final orders shall be issued following:

(a) A review of the record;

(b) A review of the initial order, if any;

(c) A review of any request for review of the initial order and any response thereto; and

(d) Consideration of protection of the public health and welfare.

(4) Unless a later date is stated in the final order, final orders shall be effective when entered but a party shall not be required to comply with a final order until the order is served upon that party.

(5) Final orders may contain orders that specified portions of the agency record shall not be disclosed as public records if necessary to protect privacy interests, the public welfare, or vital governmental functions. Such orders shall

include but are not limited to protective orders issued during the proceeding or pursuant to WAC 246-11-400.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-560, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 34.05.464, 34.05.473 and chapter 42.17 RCW. 93-08-003 (Order 347), § 246-11-560, filed 3/24/93, effective 4/24/93.]

WAC 246-11-570 Stay of final orders. No final order will be stayed except by its own terms or by order of a court of competent jurisdiction.

[Statutory Authority: RCW 18.130.050(1) and 34.05.467. 93-08-003 (Order 347), § 246-11-570, filed 3/24/93, effective 4/24/93.]

WAC 246-11-580 Reconsideration of final orders. (1) Within ten days of service of a final order, either party may file a petition for reconsideration, stating the specific grounds upon which reconsideration is requested and the relief requested.

(2) Grounds for reconsideration shall be limited to:

- (a) Specific errors of fact or law; or
- (b) Implementation of the final order would require department activities inconsistent with current department practice; or

(c) Specific circumstances render the person requesting the reconsideration unable to comply with the terms of the order.

(3) Petitions for reconsideration must be served upon the opposing party and filed with the adjudicative clerk office within ten days of service of the final order.

(4) If reconsideration is requested based on an error of fact, the request for reconsideration shall contain specific reference to the record. If reconsideration is requested based on testimony of record, the request for reconsideration shall contain specific reference to the testimony. The presiding officer may require that the party requesting reconsideration submit a copy of the transcript of the adjudicative proceeding and provide specific reference to the transcript.

(5) The petition for reconsideration is denied if, within twenty days of the date the petition is filed, the presiding officer:

- (a) Denies the petition;
- (b) Does not act upon the petition; or
- (c) Does not serve the parties with notice of the date by which he/she will act on the petition.

(6) If the presiding officer determines to act upon the petition, the opposing party shall be provided at least ten days in which to file a response to the petition.

(7) Disposition of petitions for reconsideration shall be in the form of a written order denying the petition, granting the petition and dissolving or modifying the final order, or granting the petition and setting the matter for further proceedings.

[Statutory Authority: RCW 18.155.040. 97-13-015, § 246-11-580, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-580, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.470. 93-08-003 (Order 347), § 246-11-580, filed 3/24/93, effective 4/24/93.]

(2003 Ed.)

WAC 246-11-590 Agency record of adjudicative proceedings. (1) The department shall maintain an official record of each adjudicative proceeding.

(2) The record shall include:

- (a) Notices of all proceedings;
- (b) Any prehearing order;
- (c) Any motions, pleadings, briefs, petitions, and requests filed, and rulings thereon;
- (d) Evidence received or considered;
- (e) A statement of matters officially noted;
- (f) Offers of proof and objections and rulings thereon;
- (g) Any proposed findings, requested orders, and exceptions;
- (h) Any recording of the adjudicative proceeding and any transcript of all or part of the adjudicative proceeding considered before final disposition of the matter;

(i) Any final order, initial order, or order on reconsideration; and

(j) Matters placed on the record following an ex parte communication, if any.

(3) The record shall be subject to disclosure as provided by RCW 42.17.250 through 42.17.340, and by WAC 246-11-130, except as limited by protective orders and provisions contained in the final order.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-590, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1), 34.05.476 and chapter 42.17 RCW. 93-08-003 (Order 347), § 246-11-590, filed 3/24/93, effective 4/24/93.]

WAC 246-11-600 Judicial review. (1) Judicial review of actions taken under this chapter shall be as provided in RCW 34.05.510 et seq.

(2) Notice of the opportunity for judicial review shall be provided in all final orders.

(3) Following a request for judicial review, the record forwarded to the reviewing court shall be those portions of the agency record designated by the parties within the time period set by the board.

[Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-600, filed 1/31/94, effective 3/3/94. Statutory Authority: RCW 18.130.050(1) and 34.05.510. 93-08-003 (Order 347), § 246-11-600, filed 3/24/93, effective 4/24/93.]

WAC 246-11-610 Vacating an order for reason of default or withdrawal. (1) A party may petition to vacate a default order entered against that party for failing to attend an adjudicative proceeding requested by that party by:

(a) Specifying the grounds relied upon in the petition; and

(b) Filing the petition at the adjudicative clerk office within seven days of service of the default order.

(2) The presiding officer shall consider the petition and shall:

(a) Grant the motion to vacate and reinstate the application for adjudicative proceeding, and may impose conditions on licensure pending final adjudication; or

(b) Deny the motion to vacate the default order.

[Statutory Authority: RCW 18.155.040. 97-13-015, § 246-11-610, filed 6/6/97, effective 7/7/97. Statutory Authority: RCW 18.130.050(1) and 18.130.060(3). 94-04-078, § 246-11-610, filed 1/31/94, effective 3/3/94.]

[Title 246 WAC—p. 95]

Statutory Authority: RCW 18.130.050(1) and 34.05.220. 93-08-003 (Order 347), § 246-11-610, filed 3/24/93, effective 4/24/93.]

Chapter 246-12 WAC
ADMINISTRATIVE PROCEDURES AND
REQUIREMENTS FOR CREDENTIALLED HEALTH
CARE PROVIDERS

WAC

PART 1
GENERAL PROVISIONS

246-12-001 Purpose and scope.
246-12-010 Definitions.

PART 2
INITIAL AND RENEWAL CREDENTIALING OF PRACTITIONERS

246-12-020 How to obtain an initial credential.
246-12-030 How to renew a credential.
246-12-040 How to return to active status when a credential has expired.

PART 3
INITIAL AND RENEWAL CREDENTIALING OF BUSINESSES

246-12-060 How to obtain an initial business credential.
246-12-070 How to renew a business credential.
246-12-080 When a business credential expires.

PART 4
INACTIVE CREDENTIAL

246-12-090 How to obtain an inactive credential.
246-12-100 How to renew an inactive credential.
246-12-110 How to return to active status from inactive status.

PART 5
RETIRED ACTIVE CREDENTIAL

246-12-120 How to obtain a retired active credential.
246-12-130 How to renew a retired active credential.
246-12-140 How to return to active status from retired active status.

PART 6
CREDENTIAL SUSPENSIONS

246-12-160 How to return to active status following a mandated suspension.
246-12-165 How to return to active status following a disciplinary suspension.

PART 7
CONTINUING EDUCATION

246-12-170 When is continuing education required?
246-12-180 How to prove compliance.
246-12-190 Auditing for compliance.
246-12-200 What is acceptable audit documentation?
246-12-210 When is a practitioner exempt from continuing education?
246-12-220 How credit hours for continuing education courses are determined.
246-12-230 Carrying over of continuing education credits.
246-12-240 Taking the same course more than once during a reporting cycle.

PART 8
AIDS PREVENTION AND INFORMATION EDUCATION
REQUIREMENTS

246-12-250 Definitions.
246-12-260 Who must obtain AIDS education?
246-12-270 Acceptable AIDS education and training.
246-12-280 What is acceptable documentation?

PART 9
DUPLICATE CREDENTIALS OR WALL CERTIFICATES

246-12-290 How to obtain a duplicate credential or wall certificate.

PART 10
PRACTITIONER NAME AND ADDRESS CHANGES

246-12-300 Name changes.
246-12-310 Address changes.
246-12-320 Other information.

PART 11
FEES, PAYMENTS AND REFUNDS

246-12-330 General information.
246-12-340 Refund of fees.
246-12-350 Making payments.
246-12-360 Other information.

PART 1
GENERAL PROVISIONS

WAC 246-12-001 Purpose and scope. The rules in this chapter are intended to ensure consistent application of administrative procedures and requirements for licensure, certification and registration of health care practitioners credentialed under the Uniform Disciplinary Act (RCW 18.130-040), except those credentialed under chapter 18.73 RCW (emergency medical services). Within the rules there are several references to additional requirements which may be unique to a profession. Examples are the renewal cycle, fees, continuing education or competency requirements. Refer to individual profession's laws and rules for further guidance and information. Health profession laws and rules are available in public libraries and in publications by the department of health.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-001, filed 2/13/98, effective 3/16/98.]

WAC 246-12-010 Definitions. (1) "Business": A business is an adult family home provider owned by a corporation regulated under chapter 18.48 RCW; a pharmaceutical firm regulated under chapter 18.64 RCW; or a nursing pool regulated under chapter 18.52C RCW; or a health care assistant regulated under chapter 18.135 RCW.

(2) "Credential": A credential is a license, certification, or registration issued to a person to practice a regulated health care profession. Whether the credential is a license, certification or registration is determined by the law regulating the profession.

(3) "Declaration": A declaration is a statement signed by the practitioner on a form provided by the department of health for verifying continuing education, AIDS training, or other requirements. When required, declarations must be completed and signed to be effective verification to the department.

(4) "Disciplinary suspension": The regulatory entity places the credential in disciplinary suspension status when there is a finding of unprofessional conduct. Refer to the Uniform Disciplinary Act (RCW 18.130.160).

(5) "Mandated suspension": The department of health places the credential in mandated suspension status when a law requires suspension of a credential under certain circumstances. This suspension is nondiscretionary for the department of health. Examples of mandated suspension are default on a student loan and failure to pay child support. The practitioner may not practice while on mandated suspension. The credential must be returned to active status before the practitioner may practice. See Part 6 of this chapter.

(6) "Practitioner": A practitioner is an individual health care provider listed under the Uniform Disciplinary Act, RCW 18.130.040.

(7) "Regulatory entities": A "regulatory entity" is a board, commission, or the secretary of the department of health designated as the authority to regulate one or more professions or occupations in this state. Practitioner health care practice acts and the Uniform Disciplinary Act (UDA) designate whether it is a board, commission, or the secretary of the department of health which has the authority to adopt rules, discipline health care providers, and determine requirements for initial licensure and continuing education requirements.

The regulatory entity determines whether disciplinary action should be taken on a credential for unprofessional conduct. These actions may include revocation, suspension, practice limitations or conditions upon the practitioner.

(8) "Renewal": Every credential requires renewal. The renewal cycle is either one year or two years, depending on the profession.

(9) "Secretary": The secretary is the secretary of the department of health or his or her designee.

(10) "Status": All credentials are subject to the Uniform Disciplinary Act (UDA) regardless of status. A credential status may be in any one of the following:

(a) Most credentials are in "active" status. These practitioners are authorized to practice the profession. These practitioners need to renew the credential each renewal cycle. See Part 2 of this chapter.

(b) The department of health places the credential in "expired" status if the credential is not renewed on time. While in expired status, the practitioner is not authorized to practice. Practice on an expired status is a violation of law and subject to disciplinary action. See Part 2 of this chapter.

(c) A practitioner may place the credential in "inactive" status if authorized by the regulatory entity. This means the practitioner is not practicing the profession. See Part 4 of this chapter.

(d) A practitioner may place the credential in "retired active" status if authorized by the regulatory entity. This means the practitioner can practice only intermittently or in emergencies. See Part 5 of this chapter.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-010, filed 2/13/98, effective 3/16/98.]

PART 2

INITIAL AND RENEWAL CREDENTIALING OF PRACTITIONERS

WAC 246-12-020 How to obtain an initial credential.

(1) An initial credential for a practitioner is issued once all eligibility requirements are met.

(2) To obtain an initial credential, the practitioner must:

(a) Pay applicable application, examination and licensing fees;

(b) Submit an application on forms approved by the secretary;

(c) Submit supporting documentation required by the regulatory entity.

(3) The initial credential will expire on the practitioner's birthday, except for faculty or postgraduate education credentials authorized by law. Initial credentials issued within

(2003 Ed.)

ninety days of the practitioner's birthday do not expire until the practitioner's next birthday.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-020, filed 2/13/98, effective 3/16/98.]

WAC 246-12-030 How to renew a credential. (1) The expiration date for all credentials is the practitioner's birthday, except for faculty or postgraduate education credentials authorized by law.

(2) A credential period may be one or two years. To determine the renewal cycle, refer to the individual laws and rules pertaining to your profession.

(3) To renew a credential, the practitioner must:

(a) Pay the renewal fee;

(b) Pay the substance abuse monitoring surcharge, if required by the profession; and

(c) Provide written declarations or documentation, if required for the profession.

(4) Prior to the credential expiration date, courtesy renewal notices are mailed to the address on file. Practitioners should return the renewal notice when renewing their credential. Failure to receive a courtesy renewal notice does not relieve or exempt the credential renewal requirement.

(5) Renewal fees are accepted by the department no sooner than ninety days prior to the expiration date.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-030, filed 2/13/98, effective 3/16/98.]

WAC 246-12-040 How to return to active status when a credential has expired.

(1) The credential status is **expired** if the practitioner does not renew on or before the expiration date. Any renewal that is postmarked or presented to the department after midnight on the expiration date is late, and subject to a **late renewal penalty fee**. The practitioner must not practice until the credential is returned to active status.

(2) A credential is returned to active status by complying with the following:

(a) Expired for one renewal cycle or less:

(i) Pay the late renewal penalty fee;

(ii) Pay the current renewal fee;

(iii) Pay the current substance abuse monitoring surcharge, if required by the profession;

(iv) Provide written declarations or documentation, if required for the profession; and

(v) Comply with current continuing education or continuing competency requirements if required by the profession.

(b) Expired for more than one renewal cycle but less than three years:

(i) Complete an abbreviated application form;

(ii) Pay the late renewal penalty fee;

(iii) Pay the current renewal fee;

(iv) Pay the current substance abuse monitoring surcharge, if required by the profession;

(v) Pay the expired credential reissuance fee;

(vi) Provide a written declaration that no action has been taken by a state or federal jurisdiction or hospital which

would prevent or restrict the practitioner's practice of the profession;

(vii) Provide a written declaration that he or she has not voluntarily given up any credential or privilege or has not been restricted in the practice of the profession in lieu of or to avoid formal action;

(viii) Provide a written declaration that continuing education and competency requirements for the two most recent years have been met, if required for the profession to maintain an active credential; and

(ix) Provide other written declarations or documentation, if required for the profession.

(c) Expired for over three years:

(i) Complete an abbreviated application form;

(ii) Pay the late renewal penalty fee;

(iii) Pay the current renewal fee;

(iv) Pay the current substance abuse monitoring surcharge, if required by the profession;

(v) Pay the expired credential reissuance fee;

(vi) Satisfy other competency requirements of the regulatory entity, if required;

(vii) Provide a written declaration that no action has been taken by a state or federal jurisdiction or hospital which would prevent or restrict the practitioner's practice of the profession;

(viii) Provide a written declaration that he or she has not voluntarily given up any credential or privilege or has not been restricted in the practice of the profession in lieu of or to avoid formal action;

(ix) Provide a written declaration that continuing education or competency requirements for the two most recent years have been met, if required for the profession to maintain an active credential;

(x) Provide other written declarations or documentation, if required for the profession; and

(xi) If not previously provided, provide proof of AIDS education as required for the profession and in Part 8 of this chapter.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-040, filed 2/13/98, effective 3/16/98.]

PART 3

INITIAL AND RENEWAL CREDENTIALING OF BUSINESSES

WAC 246-12-060 How to obtain an initial business credential. An initial credential for a business is issued once all eligibility requirements are met. To obtain an initial credential, the business must:

(1) Pay all applicable application and license fees;

(2) Submit an application on forms approved by the secretary;

(3) Submit supporting documentation required by the regulatory entity.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-060, filed 2/13/98, effective 3/16/98.]

[Title 246 WAC—p. 98]

WAC 246-12-070 How to renew a business credential. (1) A business expires on a date determined by the regulatory entity.

(2) A credential period may be one or two years. Refer to the profession laws and rules to determine the renewal cycle and expiration date.

(3) To renew a credential the business must:

(a) Pay the renewal fee; and

(b) Provide written declarations or documentation, if required for the profession.

(4) Prior to the credential expiration date, courtesy renewal notices are mailed to the address on file. Businesses should return the renewal notice when renewing their credential. Failure to receive a courtesy renewal notice does not relieve or exempt the credential renewal requirement.

(5) Renewal fees are accepted by the department within ninety days prior to the expiration date.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-070, filed 2/13/98, effective 3/16/98.]

WAC 246-12-080 When a business credential expires. (1) The business credential expires if the credential is not renewed on or before the expiration date. The business must not open for business or otherwise operate until the credential is renewed.

(2) A business credential is renewed by complying with the following:

(a) Expired for three years or less:

(i) Pay the late renewal penalty fee;

(ii) Pay the current renewal fee for each renewal cycle where the credential was expired; and

(iii) Provide written declarations or documentation, if required for the profession.

(b) Expired more than three years:

(i) Comply with the qualifications and procedures for initial credentialing; and

(ii) Pay initial credentialing fee.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-080, filed 2/13/98, effective 3/16/98.]

PART 4

INACTIVE CREDENTIAL

WAC 246-12-090 How to obtain an inactive credential. A practitioner may obtain an inactive credential if authorized by the regulatory entity. Refer to the profession rules to determine if this status is available.

(1) To obtain an inactive credential the practitioner must submit a letter notifying the department of health of the intent to obtain an inactive credential.

(2) A practitioner may apply for an inactive credential if he or she meets the following criteria:

(a) Holds an active Washington state credential;

(b) Is in good standing; and

(c) Will not practice in Washington.

(3) The practitioner may obtain an inactive credential at any time the criteria in subsection (2) of this section are met. The fee for the initial inactive credential will be due when the active credential expires. Portions of the current renewal fee

(2003 Ed.)

will not be prorated or refunded for the remaining active renewal cycle.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-090, filed 2/13/98, effective 3/16/98.]

WAC 246-12-100 How to renew an inactive credential. (1) The expiration for all credentials is the practitioner's birthday. To renew an inactive credential, the practitioner must:

- (a) Pay the inactive credential renewal fee; and
- (b) Pay the substance abuse monitoring surcharge, if required by the profession.

(2) To determine the renewal cycle, refer to the individual laws and rules pertaining to your profession.

(3) Inactive credential renewal fees are accepted by the department no sooner than ninety days prior to the expiration date.

(4) Prior to the inactive credential expiration date, courtesy renewal notices are mailed to the address on file. Practitioners should return the renewal notice when renewing their credential. Failure to receive a courtesy renewal notice does not relieve or exempt the inactive credential renewal requirement.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-100, filed 2/13/98, effective 3/16/98.]

WAC 246-12-110 How to return to active status from inactive status. To change an inactive credential to an active credential status the practitioner must:

- (1) Notify the department in writing of the change;
- (2) Pay the appropriate current active renewal fee;
- (3) Pay the current substance abuse monitoring surcharge, if required by the profession.

(4) Provide a written declaration that no action has been taken by a state or federal jurisdiction or hospital which would prevent or restrict the practitioner's practice of the profession;

(5) Provide a written declaration that he or she has not voluntarily given up any credential or privilege or has not been restricted in the practice of the profession in lieu of or to avoid formal action;

(6) Provide a written declaration that continuing education and competency requirements for the two most recent years have been met, if required for the profession;

(7) Provide other written declarations or documentation, if required for the profession;

(8) Satisfy other competency requirements of the regulatory entity; if required; and

(9) If not previously provided, provide proof of AIDS education as required for the profession and in Part 8 of this chapter.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-110, filed 2/13/98, effective 3/16/98.]

**PART 5
RETIRED ACTIVE CREDENTIAL**

WAC 246-12-120 How to obtain a retired active credential. A practitioner may obtain a retired active status cre-

(2003 Ed.)

dential if authorized by the regulatory entity. Refer to the profession rules to determine if this status is available.

(1) To obtain a retired active credential the practitioner must submit a letter notifying the department of health of the intent to practice only on an intermittent or emergency basis.

(2) A practitioner may apply for a retired active credential (refer to RCW 18.130.250) if he or she meets the following criteria:

- (a) Holds an active Washington state credential;
- (b) Is in good standing; and either
- (c) Will practice no more than ninety days each year in Washington state; or
- (d) Will practice only in emergency circumstances such as earthquakes, floods, times of declared war or other states of emergency.

(3) The practitioner may obtain a retired active credential at any time the criteria in subsection (2) of this section are met. The fee for the initial retired active credential will be due when the active credential expires. Portions of the current renewal fee will not be prorated or refunded for the remaining active renewal cycle.

(4) The profession may define specific practice settings in which services may be provided. Refer to the laws and rules of the profession to determine if specific practice settings are identified.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-120, filed 2/13/98, effective 3/16/98.]

WAC 246-12-130 How to renew a retired active credential. (1) The expiration for all credentials is the practitioner's birthday. To determine the renewal cycle, refer to the individual laws and rules pertaining to your profession.

(2) To renew a retired active credential, the practitioner must:

- (a) Pay the retired active credential renewal fee;
- (b) Pay the substance abuse monitoring surcharge, if required by the profession;
- (c) Provide a written declaration stating that he or she practiced only intermittently or in an emergency during the previous renewal cycle;
- (d) Provide a written declaration stating that continuing education or competency requirements have been met, if required for the profession; and
- (e) Provide other written declarations or documentation, if required for the profession.

(3) Retired active credential renewal fees are accepted by the department no sooner than ninety days prior to the expiration date.

(4) Prior to the retired active credential expiration date, courtesy renewal notices are mailed to the address on file. Practitioners should return the renewal notice when renewing their credential. Failure to receive a courtesy renewal notice does not relieve or exempt the retired active credential renewal requirement.

(5) Retired active credential renewal fees are accepted by the department no sooner than ninety days prior to the expiration date.

(6) Prior to the retired active credential expiration date, courtesy renewal notices are mailed to the address on file. Practitioners should return the renewal notice when renewing their credential. Failure to receive a courtesy renewal notice does not relieve or exempt the retired active credential renewal requirement.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-130, filed 2/13/98, effective 3/16/98.]

WAC 246-12-140 How to return to active status from retired active status. To change a retired active credential to an active credential status the practitioner must:

- (1) Notify the department in writing of the change;
- (2) Pay the appropriate current active renewal fee;
- (3) Pay the current substance abuse monitoring surcharge, if required by the profession.
- (4) Provide a written declaration that no action has been taken by a state or federal jurisdiction or hospital which would prevent or restrict the practitioner's practice of the profession;
- (5) Provide a written declaration that he or she has not voluntarily given up any credential or privilege or has not been restricted in the practice of the profession in lieu of or to avoid formal action;
- (6) Provide a written declaration that continuing education and competency requirements have been met, if required for the profession;
- (7) Provide other written declarations or documentation, if required for the profession;
- (8) Satisfy other competency requirements of the regulatory entity, if required; and
- (9) If not previously provided, provide proof of AIDS education as required for the profession and in Part 8 of this chapter.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-140, filed 2/13/98, effective 3/16/98.]

PART 6 CREDENTIAL SUSPENSIONS

WAC 246-12-160 How to return to active status following a mandated suspension. (1) The department of health places the credential in mandated suspension status when a law requires suspension of a credential under certain circumstances. This suspension is not discretionary for the department of health. Examples of mandated suspension are default on a student loan and failure to pay child support. The practitioner may not practice while on mandated suspension. The credential must be returned to active status before the practitioner may practice.

(2) A credential is returned to active status by complying with the following:

- (a) Meet all the requirements outlined in the order mandating the suspension;
- (b) Pay the current renewal fee, if due;
- (c) Pay the substance abuse monitoring surcharge if required by the profession;
- (d) Pay a "return from mandated suspension fee" of two hundred forty-five dollars. Standard renewal fees are not required during the period of the suspension;
- (e) Provide written declaration that all continuing education and competency requirements for the entire suspension period have been met, if required by the profession;
- (f) Provide other written declarations or documentation, if required for the profession; and
- (g) If the mandated suspension was for more than three years the practitioner must also comply with any specific requirements identified in rule by that profession's regulatory entity.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-160, filed 2/13/98, effective 3/16/98.]

[Title 246 WAC—p. 100]

WAC 246-12-165 How to return to active status following a disciplinary suspension. (1) The regulatory entity may place a credential on disciplinary suspension when there is a finding of unprofessional conduct. The practitioner may not practice while on suspension unless the suspension is stayed. The credential must be returned to active status before the practitioner may practice.

(2) A credential is returned to active status by complying with the following:

- (a) Meet all the requirements outlined in the disciplinary order;
- (b) Pay the current renewal fee, if due. Standard renewal fees are not required during the period of the suspension unless the suspension is stayed;
- (c) Pay the substance abuse monitoring surcharge if required by the profession;
- (d) Provide written declaration that all continuing education and competency requirements for the entire suspension period have been met, if required by the profession; and
- (e) Provide other written declarations or documentation, if required for the profession.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-165, filed 2/13/98, effective 3/16/98.]

PART 7 CONTINUING EDUCATION

WAC 246-12-170 When is continuing education required? Continuing education is required for renewal of a credential only if authorized in law. The regulatory entity defines the continuing education requirements. Practitioners should refer to the laws and rules relating to their profession to determine if continuing education is required.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-170, filed 2/13/98, effective 3/16/98.]

WAC 246-12-180 How to prove compliance. If continuing education is required for renewal, the practitioner must verify compliance by submitting a signed declaration of compliance.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-180, filed 2/13/98, effective 3/16/98.]

WAC 246-12-190 Auditing for compliance. Up to twenty-five percent of the practitioners are randomly audited for continuing education compliance after the credential is renewed. It is the practitioner's responsibility to submit documentation of completed continuing education activities at the time of the audit. Failure to comply with the audit documentation request or failure to supply acceptable documentation within sixty days may result in disciplinary action.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-190, filed 2/13/98, effective 3/16/98.]

WAC 246-12-200 What is acceptable audit documentation? Practitioners must:

- (1) Prove compliance which may include course or program certificates of training or transcripts. Refer to the rules of your profession for more specific guidance.

(2003 Ed.)

(2) Keep records for four years documenting attendance description of learning.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-200, filed 2/13/98, effective 3/16/98.]

WAC 246-12-210 When is a practitioner exempt from continuing education? A practitioner may be excused from or granted an extension of continuing education requirements due to illness or other extenuating circumstances. The profession's regulatory entity determines when the requirements may be waived or may grant an extension.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-210, filed 2/13/98, effective 3/16/98.]

WAC 246-12-220 How credit hours for continuing education courses are determined. A credit hour is defined as time actually spent in a course or other activities as determined by the regulatory entity as fulfilling continuing education requirements. A credit hour for time actually spent in a course can not be less than fifty minutes.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-220, filed 2/13/98, effective 3/16/98.]

WAC 246-12-230 Carrying over of continuing education credits. Continuing education hours in excess of the required hours earned in a reporting period cannot be carried forward to the next reporting cycle.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-230, filed 2/13/98, effective 3/16/98.]

WAC 246-12-240 Taking the same course more than once during a reporting cycle. The same course taken more than once during a reporting cycle will only be counted once.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-240, filed 2/13/98, effective 3/16/98.]

PART 8

AIDS PREVENTION AND INFORMATION EDUCATION REQUIREMENTS

WAC 246-12-250 Definitions. (1) "Acquired immunodeficiency syndrome" or "AIDS" means the clinical syndrome of HIV-related illness as defined by the board of health by rule.

(2) "Office on AIDS" means that section with the department of health or any successor department with jurisdiction over public health matters as defined in chapter 70.24 RCW.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-250, filed 2/13/98, effective 3/16/98.]

WAC 246-12-260 Who must obtain AIDS education? All practitioners must demonstrate completion of four or seven clock hours of AIDS education prior to initially obtaining a health care credential. Refer to the specific profession rules to determine the number of hours of AIDS education and training that are required.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-260, filed 2/13/98, effective 3/16/98.]

(2003 Ed.)

WAC 246-12-270 Acceptable AIDS education and training. (1) The regulatory entity will accept education and training that is consistent with the model curriculum available from the office on AIDS.

(2) AIDS education and training must include, but is not limited to, the following: Etiology and epidemiology; testing and counseling; infection control guidelines; clinical manifestations and treatment; legal and ethical issues to include confidentiality; and psychosocial issues to include special population considerations.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-270, filed 2/13/98, effective 3/16/98.]

WAC 246-12-280 What is acceptable documentation? Practitioners must:

(1) Provide a written declaration that the minimum education and training has been completed;

(2) Keep records for two years documenting training and description of learning; and

(3) Be prepared to validate, through submission of these records, that training has taken place.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-280, filed 2/13/98, effective 3/16/98.]

PART 9

DUPLICATE CREDENTIALS OR WALL CERTIFICATES

WAC 246-12-290 How to obtain a duplicate credential or wall certificate. Practitioners may obtain a duplicate credential or wall certificate by providing a written request and paying a fee established by the secretary.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-290, filed 2/13/98, effective 3/16/98.]

PART 10

PRACTITIONER NAME AND ADDRESS CHANGES

WAC 246-12-300 Name changes. It is the responsibility of each practitioner to maintain his or her correct name on file with the department. Requests for name changes must be submitted in writing along with acceptable documentation. Acceptable documentation includes a copy of a marriage certificate, divorce decree or court order of legal name change.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-300, filed 2/13/98, effective 3/16/98.]

WAC 246-12-310 Address changes. It is the responsibility of each practitioner to maintain his or her current address on file with the department. Requests for address changes may be made either by telephone or in writing. The mailing address on file with the department will be used for mailing of all official matters to the practitioner.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-310, filed 2/13/98, effective 3/16/98.]

WAC 246-12-320 Other information. Refer to WAC 246-01-100 and 246-11-060 for more information on maintaining a current address with the department.

[Title 246 WAC—p. 101]

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-320, filed 2/13/98, effective 3/16/98.]

PART 11 FEES, PAYMENTS AND REFUNDS

WAC 246-12-330 General information. The costs of health care professional credentialing programs must be fully supported by members of that profession. The amount of all fees are established by the secretary and set by rule. Fees can be found in rules pertaining to each profession.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-330, filed 2/13/98, effective 3/16/98.]

WAC 246-12-340 Refund of fees. Fees submitted with applications for initial credentialing, examinations, renewal, and other fees associated with the licensing and regulation of the profession are nonrefundable.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-340, filed 2/13/98, effective 3/16/98.]

WAC 246-12-350 Making payments. (1) Make checks or money orders payable to the department of health.

(2) Practitioners should include their credential number on the check, draft or money order.

(3) Applicants should include profession for which they are applying on the check, draft or money order.

(4) Send check, draft or money order to:

Department of Health
P.O. Box 1099
Olympia, Washington 98507-1099

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-350, filed 2/13/98, effective 3/16/98.]

WAC 246-12-360 Other information. Refer to RCW 43.70.250, 43.70.320 and WAC 246-08-560 for more information relating to fees and refunds.

[Statutory Authority: RCW 43.70.280. 98-05-060, § 246-12-360, filed 2/13/98, effective 3/16/98.]

Chapter 246-14 WAC UNIFORM PROCEDURES FOR COMPLAINT RESOLUTION

WAC

246-14-010	Intent.
246-14-020	Definitions.
246-14-030	What happens if a time period expires?
246-14-040	Initial assessment of reports.
246-14-050	Investigation of complaints.
246-14-060	Case disposition.
246-14-070	Limited extensions of basic time periods.
246-14-080	Extension with management oversight.
246-14-090	Adjudication of statement of charges.
246-14-100	Resolution of a statement of allegations.
246-14-110	What happens if a case returns to a prior stage?
246-14-120	Notice of applicable time periods.

WAC 246-14-010 Intent. These rules establish basic time periods for processing and resolving complaints against credentialed health care providers and applicants. The rules also provide for extensions of the basic time periods and

[Title 246 WAC—p. 102]

enforcement mechanisms to ensure timely disposition of complaints and adjudicative proceedings. The department of health does not anticipate that the basic time period will be used in all cases. These rules are adopted as required by RCW 18.130.095(1). The intent is to promote timely protection of the public and fairness to credential holders, applicants, and complainants, without sacrificing public safety.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-010, filed 5/3/00, effective 7/2/00.]

WAC 246-14-020 Definitions. (1) A "report" is information received by the department of health which raises concern about conduct, acts or conditions related to a credential holder or applicant or about the credential holder or applicant's ability to practice with reasonable skill and safety. If the disciplining authority determines a report warrants an investigation, the report becomes a "complaint."

(2) Basic time periods may be extended for "good cause." Good cause is determined on a case-by-case basis, balancing all relevant factors including risk of harm to the public. Some examples of relevant factors may be circumstances not within the control of the department or the disciplining authority, need for expert review not available within the department or the disciplining authority, and activities which cannot be completed within the time period despite effort to do so.

(3) "Days" are calendar days unless indicated. If a time period would end on a Saturday, Sunday, or state holiday, that time period will end on the next business day.

(4) "Management oversight" is enhanced direction of a case imposed by department management as an enforcement mechanism when an extension is granted. The person granting the extension will assure the case moves through the stage promptly. Some examples of enhanced direction may be staffing changes, resource reallocation, and work planning.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-020, filed 5/3/00, effective 7/2/00.]

WAC 246-14-030 What happens if a time period expires? If a basic time period expires, the case cannot continue in its current stage unless an extension is granted. Department staff and a board or commission member, if applicable, are responsible for seeking an extension or moving the case to another stage. Extensions may be granted retroactively for good cause, but such extensions must meet all otherwise applicable criteria.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-030, filed 5/3/00, effective 7/2/00.]

WAC 246-14-040 Initial assessment of reports. (1) Initial assessment is the process of determining whether a report warrants an investigation and becomes a complaint. The complainant and credential holder or applicant will be notified as soon as possible after the initial assessment is complete.

(2) The basic time period for initial assessment is twenty-one days.

(2003 Ed.)

(3) All reports will be reviewed for imminent danger within two working days. If imminent danger is identified, the report will be immediately forwarded for processing.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-040, filed 5/3/00, effective 7/2/00.]

WAC 246-14-050 Investigation of complaints. (1) Investigation is the process of gathering information which examines the complaint and the situation surrounding the complaint.

(2) The basic time period for investigation is one hundred seventy days.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-050, filed 5/3/00, effective 7/2/00.]

WAC 246-14-060 Case disposition. (1) Case disposition is the process of deciding whether to issue a statement of charges on a complaint, to take informal action, or to close the complaint without action. It includes the processes necessary to implement the decision.

(2) The basic time period for case disposition is one hundred forty days.

(3) If a complaint returns to the case disposition stage because a stipulation to informal disposition has been rejected, there is a new basic period of sixty days.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-060, filed 5/3/00, effective 7/2/00.]

WAC 246-14-070 Limited extensions of basic time periods. (1) If good cause exists, limited extensions of the basic time periods may be granted by the executive director of the program for initial assessment, investigation, and case disposition stages. Each first and second limited extension may be granted only one time for each report or complaint.

(2) The maximum lengths for limited extensions are

Stage	First extension	Second extension
Initial assessment	7 days	none
Investigation	30 days	60 days
Case disposition decision	20 days	40 days
Case disposition decision if informal disposition is rejected	7 days	7 days

(3) A request for limited extension should document the reason or reasons for the request. If the disciplining authority is a board or commission, the member of the board or commission assigned to review the case may make recommendations. Those recommendations will be included in the request for limited extension and given consideration by the executive director. If the recommendation is based on professional expertise, it will be given substantial deference.

(4) Requests for limited extensions must be submitted to the assigned executive director. The reason(s) for the request and for the decision will be documented in the file.

(5) If a limited extension is granted, the executive director will take appropriate steps to supervise the work through the extension period.

(2003 Ed.)

(6) If a request for limited extension is denied, the denial may be appealed to the director.

(7) If department staff believe a limited extension will not be sufficient to complete a particular stage, an extension with management oversight may be requested.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-070, filed 5/3/00, effective 7/2/00.]

WAC 246-14-080 Extension with management oversight. (1) If good cause exists, the division director or the assistant secretary may grant extensions with management oversight. Extensions with oversight may be requested for the initial assessment, investigation, and case disposition stages. There is no maximum length for an extension with management oversight, but the time granted must be based on the request.

(2) A request for extension with management oversight should document the reason(s) for the request. If the disciplining authority is a board or commission, the member of the board or commission assigned to review the case may make recommendations. Those recommendations will be included in the request for extension and given consideration by the division director or assistant secretary. If the recommendation is based on professional expertise, it will be given substantial deference.

(3) Requests for an extension with management oversight must be submitted to the division director or the assistant secretary. The reason(s) for the request and the decision will be documented in the file.

(4) If an extension with oversight is granted, the division director or assistant secretary will impose management oversight to assure that there is a plan for progress in the case and that progress is actually being made. Time limits may be imposed and progress reports may be required.

(5) If a request for extension with oversight is denied, the decision may be appealed to the secretary.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-080, filed 5/3/00, effective 7/2/00.]

WAC 246-14-090 Adjudication of statement of charges. (1) Procedures for adjudication of statements of charges are contained in chapters 246-10 and 246-11 WAC. Those rules provide for twenty days to file an answer, with a sixty-day extension for good cause, and thirty days to issue a scheduling order. They also provide for continuances.

(2) The basic time period for settlement, discovery, and commencement of hearing is one hundred eighty days or less, to be set in the scheduling order.

(3) The basic time period for issuing an order is forty-five days from the end of the hearing including deliberations when the disciplining authority is a board or commission. The secretary may grant a forty-five day limited extension.

(4) If no answer is filed or default occurs during the adjudication, a proposed final order of default will be submitted to the disciplining authority within sixty days of notice of failure to respond or notice of default. A final order will be issued within forty-five days of the submission.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-090, filed 5/3/00, effective 7/2/00.]

WAC 246-14-100 Resolution of a statement of allegations. (1) If a statement of allegations is issued, the respondent will have fourteen days to make an initial response. The attorney handling the case for the program may grant a limited extension of fourteen days. If no response is made, the attorney may determine informal disposition has been rejected. The case will be returned to case disposition.

(2) If a response is made, the basic period for completion of informal resolution is sixty days. If informal resolution has not been reached within that time, the case will return to case disposition to determine appropriate action.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-100, filed 5/3/00, effective 7/2/00.]

WAC 246-14-110 What happens if a case returns to a prior stage? If a case returns to a prior stage, any unused basic time period days or extensions in the prior stage may be used. If additional time is needed, extensions may be requested as in any other circumstance.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-110, filed 5/3/00, effective 7/2/00.]

WAC 246-14-120 Notice of applicable time periods.

(1) Affected credential holders, applicants, and complainants will be notified of applicable time periods and the possibility of extensions as soon as possible consistent with effective case management.

(2) Other information about applicable time periods and extensions will be released according to public records law.

[Statutory Authority: RCW 18.130.095(1). 00-10-114, § 246-14-120, filed 5/3/00, effective 7/2/00.]

Chapter 246-15 WAC

WHISTLEBLOWER COMPLAINTS IN HEALTH CARE SETTINGS

WAC

246-15-001	Purpose and scope.
246-15-010	Definitions.
246-15-020	Rights and responsibilities—Whistleblower and department.
246-15-030	Procedures for filing, investigation, and resolution of whistleblower complaints.

WAC 246-15-001 Purpose and scope. Regulations for whistleblower protection are hereby adopted pursuant to RCW 43.70.075. The purpose of these regulations is to protect the identity of persons who communicate in good faith to the department alleging the improper quality of care by a health care facility or provider as defined in this chapter, and set forth the process the department will use in receiving, investigating and resolving complaints.

[Statutory Authority: RCW 43.70.075 and 43.70.040. 97-02-013, § 246-15-001, filed 12/20/96, effective 1/20/97.]

WAC 246-15-010 Definitions. The words and phrases in this chapter have the following meanings unless the context clearly indicates otherwise.

(1) "Consumer" means:

(a) An individual receiving health care or services from a health care facility or health care professional;

(b) A person pursuant to RCW 7.70.065 authorized to provide informed consent to health care on behalf of (a) of this subsection who is not competent to consent.

(2) "Department" means the Washington state department of health.

(3) "Employee" means an individual employed by a health care facility or health care professional at the time the:

(a) Alleged improper quality of care occurred; or

(b) Alleged improper quality of care is discovered.

(4) "Good faith" means an honest and reasonable belief in the truth of the allegation.

(5) "Health care" means any care, service, or procedure provided by a health care facility or a health care provider:

(a) To diagnose, treat, or maintain a patient's physical or mental condition; or

(b) That affects the structure or function of the human body.

(6) "Health care facility" includes the following:

(a) Adult residential rehabilitation centers regulated pursuant to chapter 71.12 RCW;

(b) Alcoholism treatment facilities regulated pursuant to chapter 71.12 RCW;

(c) Alcoholism hospitals regulated pursuant to chapter 71.12 RCW;

(d) Ambulance and aid services regulated pursuant to chapter 18.73 RCW;

(e) Boarding homes regulated pursuant to chapter 18.20 RCW;

(f) Childbirth centers regulated pursuant to chapter 18.46 RCW;

(g) Home care agencies regulated pursuant to chapter 70.127 RCW;

(h) Home health agencies regulated pursuant to chapter 70.127 RCW;

(i) Hospice agencies regulated pursuant to chapter 70.127 RCW;

(j) Hospitals regulated pursuant to chapter 70.41 RCW;

(k) Pharmacies regulated pursuant to chapter 18.64 RCW;

(l) Private psychiatric hospitals regulated pursuant to chapter 71.12 RCW;

(m) Residential treatment facilities for psychiatrically impaired children and youth regulated pursuant to chapter 71.12 RCW;

(n) Rural health care facilities regulated pursuant to chapter 70.175 RCW.

(7) "Health care provider," "health care professional," "professional" or "provider" mean a person who is licensed, certified, registered or otherwise authorized by the law of this state to provide health care in the ordinary course of business or practice of a profession.

(8) "Improper quality of care," as defined in RCW 43.70.075, means any practice, procedure, action, or failure to act that violates any state law or rule of the applicable state health licensing authority under Title 18 RCW or chapters 70.41, 70.96A, 70.127, 70.175, 71.05, 71.12, and 71.24 RCW, and enforced by the department of health. Improper quality of care shall not include good faith personnel actions related to employee performance or actions taken according to established terms and conditions of employment. Good

faith personnel action will not prevent investigations of alleged improper quality of care.

(9) "Whistleblower" means a consumer, employee, or health care professional who in good faith reports alleged quality of care concerns to the department of health.

[Statutory Authority: RCW 43.70.075 and 43.70.040, 97-02-013, § 246-15-010, filed 12/20/96, effective 1/20/97.]

WAC 246-15-020 Rights and responsibilities—Whistleblower and department. (1) A person who in good faith communicates a complaint or information as defined in this chapter as provided in RCW 43.70.075 is:

(a) Immune from civil liability on claims based upon that communication to the department under RCW 4.24.510;

(b) Entitled to recover costs and reasonable attorneys' fees incurred in establishing a defense under RCW 4.24.510 if prevailing upon the defense; and

(c) Afforded the protections and remedies of the human rights commission pursuant to chapter 49.60 RCW. The department will refer whistleblowers expressing concern about reprisal or retaliatory action to the human rights commission.

(2) The department will protect the identity of the whistleblower by revealing it only:

(a) To appropriate department staff or disciplining authority member;

(b) By court order; or

(c) If the complaint is not in good faith.

[Statutory Authority: RCW 43.70.075 and 43.70.040, 97-02-013, § 246-15-020, filed 12/20/96, effective 1/20/97.]

WAC 246-15-030 Procedures for filing, investigation, and resolution of whistleblower complaints. In filing, investigating and resolving a whistleblower complaint, the department will follow its usual procedures for complaint processing while protecting a whistleblower's identity consistent with WAC 246-15-020.

(1) Filing.

(a) Upon receipt of a complaint from a whistleblower alleging improper quality of care, department staff will enter the complaint into the tracking system for complaints against health care providers or facilities and create a file on that complaint.

(b) Staff will affix a permanent cover to the letter of complaint, or other form of notice, in the complaint file, noting the statutory citation for protection of identity of the complainant.

(c) Staff will assess priority of the case and conduct the initial case planning based on the complainant information.

(2) Investigation.

(a) For cases assigned to an investigation, staff will develop an investigative plan. The investigator will gather pertinent information and perform other functions as appropriate to the allegation. The investigator may interview witnesses or others with information relevant to the investigation, review records and consult with staff of other agencies.

(b) At the conclusion of the investigation, the investigator will prepare the necessary documents, such as an investigative report summarizing the findings, and other documents necessary for the department to take further action.

(2003 Ed.)

(3) Resolution. The regulatory authority for the health facility or provider will:

(a) Review investigative findings to determine violation of any statutes or rules;

(b) Take appropriate disciplinary action as necessary;

(c) Ensure upon case closure, that the permanent cover affixed in subsection (1)(c) of this section will remain;

(d) Will code or obliterate references to the whistleblower complainant in investigative materials or in the investigative report as necessary to protect the whistleblower's identity prior to any public disclosure; and

(e) Make the case file available to the public upon case closure, subject to public disclosure and other relevant laws.

[Statutory Authority: RCW 43.70.075 and 43.70.040, 97-02-013, § 246-15-030, filed 12/20/96, effective 1/20/97.]

Chapter 246-25 WAC

ANTITRUST IMMUNITY AND COMPETITIVE OVERSIGHT

(Formerly chapter 245-02 WAC)

WAC

SUBSTANTIVE RULES

246-25-010	Definitions.
246-25-020	General policy statement—Antitrust immunity and competitive oversight.
246-25-025	Scope and applicability.
246-25-030	Cooperative activities—Policy statement.
246-25-035	Consumer access to local health services in rural areas.
246-25-040	Collective negotiations—Policy statement—Permitted negotiations—Petitions.
246-25-045	"Most favored nations clauses"—Policy statement.
246-25-050	Exclusive dealing clauses—Policy statement.

PROCEDURAL RULES

246-25-100	Purpose.
246-25-110	Form of petition and request for informal opinion.
246-25-115	Contents of requests for informal opinions and written petitions.
246-25-120	Continuing oversight and reporting requirements.
246-25-125	Additional information.
246-25-130	Submission of information.
246-25-131	Public notice and comment.
246-25-135	Commission to provide copy of informal opinion to applicant.
246-25-140	Attorney general to provide informal opinion and advice on petitions to the commission.
246-25-145	Applicant may request an adjudicative proceeding or file a petition.
246-25-150	Decision not to conduct an adjudication.
246-25-155	Adjudicative proceeding—Rules of procedure.
246-25-160	Adjudicative proceedings—Notice of hearing.
246-25-165	Presiding officer.
246-25-170	Commission to retain jurisdiction.
246-25-175	Adjudicative proceedings—Reconsideration.
246-25-180	Notice of modification or withdrawal of authorization.

SUBSTANTIVE RULES

WAC 246-25-010 Definitions. Unless the context requires otherwise, the definitions contained in this section apply throughout this chapter.

(1) "Attorney general" means the antitrust section of the office of the attorney general.

(2) "Applicant" means a certified health plan, health care facility, health care provider, or other person involved in the development, delivery, or marketing of health services or certified health plans.

[Title 246 WAC—p. 105]

(3) **"Parties"** means the natural persons, corporations, or associations involved in the plan or activity which is the subject of the proposal being reviewed.

(4) **"Petition"** means the document that shall be filed with the commission pursuant to RCW 43.72.310(3) by an applicant in order to request approval of conduct that could tend to lessen competition in the relevant market.

(5) **"Proposal"** means the plan or activity that is being reviewed.

(6) **"Request for informal opinion"** means the document that may be filed with the commission pursuant to RCW 43.72.310(1) by an applicant.

(7) **"Exclusive dealing clause"** means a clause in a contract between a certified health plan and a health care provider or facility by which the provider or facility agree not to provide services to another certified health plan.

(8) **"Health care network"** means a group of providers or facilities controlled by the providers, facilities or intermediary organizations including, but not limited to, physician-hospital organizations and independent practice associations.

(9) **"Most favored nations clause"** means terms in a contract between a certified health plan and a health care provider or facility by which the provider or facility agrees they will not charge other plans a lower price than the price charged the plan instituting the clause.

(10) **"Rural area"** means a geographical area outside the boundaries of Metropolitan Statistical Areas (MSAs) or an area within an MSA, but more than thirty minutes average travel time from an urban area of at least ten thousand population.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-010, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-010, filed 2/1/95, effective 10/1/95.]

WAC 246-25-020 General policy statement—Anti-trust immunity and competitive oversight. (1) The purpose of WAC 245-02-020 through 245-02-050 is to implement provisions of the act that require the commission to adopt rules governing antitrust immunity, competitive oversight, and conduct of certified health plans, health care providers, and health care facilities. The provisions of these rules shall be strictly construed. Whenever there is doubt as to the meaning of these rules or as to their applicability to particular conduct or circumstances, these rules shall be interpreted in a manner consistent with existing antitrust law principles of this state and of the federal government, including final orders of the Federal Trade Commission and final decisions of the federal courts interpreting the various federal antitrust statutes.

(2) Unless explicitly permitted under this chapter or pursuant to a petition approved in accordance with the provisions of RCW 43.72.310 (3) and (4), nothing in these rules shall be deemed or interpreted to permit activities or to grant immunity for those activities prohibited under RCW 43.72.-300(3) or any other activity which would constitute a per se violation of state or federal antitrust laws.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-020, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-020, filed 2/1/95, effective 10/1/95.]

[Title 246 WAC—p. 106]

WAC 246-25-025 Scope and applicability. The provisions of WAC 245-02-010 through 245-02-050 shall govern contracts and conduct among health care providers, health care facilities, and certified health plans entered into or renewed on and after October 1, 1995.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-025, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-025, filed 2/1/95, effective 10/1/95.]

WAC 246-25-030 Cooperative activities—Policy statement. The commission recognizes that reforms in the health system will occur through the development of comprehensive, integrated, and cost-effective health services delivery systems. Because the health services market place is evolving in anticipation of changes required by the act, it would not be appropriate to establish with precision specific areas where cooperative activities are entitled to immunity from antitrust laws. Pursuant to RCW 34.05.023, the commission therefore adopts as an interim policy statement the *Statements of Enforcement Policy and Analytical Principles Relating to Health Care and Antitrust* issued by the U.S. Department of Justice and the Federal Trade Commission on September 27, 1994. These nine policy statements address: (1) Mergers among hospitals; (2) hospital joint ventures involving high-technology or other expensive health care equipment; (3) hospital joint ventures involving specialized clinical or other expensive health care services; (4) providers' collective provision of nonfee-related information to purchasers of health care services; (5) providers' collective provision of fee-related information to purchasers of health care services; (6) provider participation in exchanges of price and cost information; (7) joint purchasing arrangements among health care providers; (8) physician network joint ventures; and (9) analytical principles relating to multiprovider networks.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-030, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-030, filed 2/1/95, effective 10/1/95.]

WAC 246-25-035 Consumer access to local health services in rural areas. An applicant may petition the commission for approval of a managed health care finance and delivery system in a rural area that may violate existing antitrust law principles or provisions of WAC 245-02-040, 245-02-045 or 245-02-050 but is necessary to preserve local access to regular and ongoing health services in a rural area. In addition to the requirements set forth in WAC 245-02-110, et seq., such petitions shall include information demonstrating that the proposed system: (a) Has been developed through a community-based process that takes into consideration the concerns of local residents, health care providers, public and private health care facilities, local community organizations, and appropriate state agency health planning organizations located in or with responsibility for health services in rural areas, (b) will achieve quality improvements and cost efficiencies over present health service capabilities in the rural area, (c) will result in local access to regular and ongoing services required under the uniform benefits package, (d) will combine health care service delivery and financing, and (e) will or will not have special community gover-

(2003 Ed.)

nance arrangements. Nothing contained in this section shall be deemed to relieve an applicant from meeting the requirements imposed by law for registration and certification of certified health plans.

[Statutory Authority: RCW 43.72.310, 99-04-049, recodified as § 246-25-035, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-035, filed 2/1/95, effective 10/1/95.]

WAC 246-25-040 Collective negotiations—Policy statement—Permitted negotiations—Petitions. (1) The board finds that collective negotiation by competing health care providers of certain nonfee terms and conditions of contracts with health carriers may result in procompetitive effects in the absence of any express or implied threat of retaliatory collective action by health care providers. However, the board finds few or no procompetitive effects in permitting competing health care providers to collectively negotiate contract terms and conditions that include fees or prices for provider services. The potential anticompetitive harms arising from collective exchanges of fee or price information by competing providers and collective negotiation by competing providers of the fees to be paid providers by health carriers far outweigh any potential gains in simplifying provider and health carrier negotiations, any reduction in transaction costs, and any potential gains in cost-effective health care delivery systems. To the contrary, the board finds that collective negotiation of fees or other prices for services by competing health care providers creates the potential to thwart the cost containment goals of health care reform by enabling health care providers to resist health carrier and purchaser pressure to reduce or limit the increase in prices for health care services. Except as herein provided, nothing contained in this section shall authorize any person or entity to engage in activities that would constitute violations of state or federal antitrust laws.

(2) Competing health care providers within the service area of a health carrier may meet and communicate for the purposes of collectively negotiating the following terms and conditions of contracts with health carriers:

(a) Respective provider and health carrier liability for the treatment or lack of treatment of health carrier enrollees;

(b) Administrative procedures including methods and timing of provider payment for services;

(c) Dispute resolution procedures relating to disputes between health carriers and providers including disputes between providers and health carriers that originate from enrollees;

(d) Patient referral procedures;

(e) Formulation and application of reimbursement methodology, e.g., risk pools, capitation, and capitation between providers and hospitals, except as provided in section 3;

(f) Quality assurance programs;

(g) Health service utilization review procedures; and

(h) Carrier provider selection and termination criteria, or whether to engage in selective contracting.

Nothing herein shall be construed to allow a boycott.

(3) Competing health care providers shall not meet and communicate for the purposes of collectively negotiating the following terms and conditions of contracts with health carriers:

(a) The fees or prices for services, including those arrived at by applying any reimbursement methodology procedures;

(b) The conversion factor in a resource based relative value scale reimbursement methodology or similar methodologies;

(c) The amount of any discount on the price of services to be rendered by providers;

(d) The dollar amount of capitation or fixed payment for health services rendered by providers to health carrier enrollees; or

(e) The inclusion or alteration of terms and conditions to the extent they are the subject of government regulation prohibiting or requiring the particular term or condition in question; however, such restriction does not limit provider rights to collectively petition government for a change in such regulation.

(4) Competing health care providers' exercise of collective negotiation rights granted by this section shall conform to the following criteria:

(a) Providers shall communicate or negotiate with health carriers through a third party who is authorized by the providers;

(b) Each competing provider involved in the communication and negotiation with health carriers shall make an independent decision to accept or reject a specific offer from a health carrier;

(c) Health carriers communicating or negotiating with the providers' representative shall remain free to contract with or offer different contract terms and conditions to individual competing providers;

(d) The providers' representative shall not recommend to providers that providers accept or reject the health carrier offer; the representative may only deliver the offer to providers and communicate to providers an evaluation of the positive or negative aspects of the offer;

(e) The providers' representative shall not represent more than 30% of the market of practicing providers for the provision of services of a particular provider type or specialty in the service area or proposed service area of a health carrier with less than 5% of the market, as measured by 1) the number of covered lives as reported by the Insurance Commissioner, or 2) the actual number of consumers of prepaid comprehensive health services; and

(f) The providers' representative shall comply with the provisions of subsection (5) of this section.

(5) Any person or organization proposing to act or acting as a representative of providers for the purpose of exercising the authority granted under this section shall comply with the following requirements:

(a) Before engaging in any collective negotiation with health carriers on behalf of competing health care providers, the representative shall file with the board information identifying the representative, the representative's plan of operation, and the representative's procedures to ensure compliance with this section;

(b) Before engaging in any collective negotiations with health carriers on behalf of providers, the representative shall furnish for the board's approval, a brief report identifying the proposed subject matter of the negotiations or discussions

with health carriers and the efficiencies expected to be achieved thereby.

Approval shall be withheld by the board if the proposed negotiations would exceed the authority granted under this section. The representative shall supplement the report to the board as new information becomes available that indicates that the subject matter of the negotiations with the health carrier has or will change;

(c) Within fourteen days of a health carrier decision declining negotiation, terminating negotiation, or failing to respond to a request for negotiation the representative shall report to the board the end of negotiations;

(d) Before reporting the results of negotiations with a health carrier and before giving providers an evaluation of any offer made by a health carrier, the representative shall furnish for the board's approval prior to dissemination to providers, a copy of all communications to be made to providers related to negotiations, discussions, and health carrier offers.

(6) With the advice of the attorney general, the board shall either approve or disapprove the activity as identified in the report within thirty days of filing. If disapproved, the board shall furnish a written explanation of any deficiencies along with a statement of specific remedial measures as to how such deficiencies could be corrected. A representative who fails to obtain the board's approval is deemed to act outside the authority granted under this section.

(7) Nothing contained in this section is intended to authorize competing providers to act in concert in response to a report issued by the providers' representative related to the representative's discussions or negotiations with health carriers. The representative of the providers shall advise providers of the provisions of this section and shall warn providers of the potential for legal action against providers who violate state or federal antitrust laws by exceeding the authority granted under this section.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-040, filed 1/28/99, effective 1/28/99; 96-11-133, § 245-02-040, filed 5/22/96, effective 6/22/96; 95-04-115, § 245-02-040, filed 2/1/95, effective 10/1/95.]

WAC 246-25-045 "Most favored nations clauses"—

Policy statement. "Most favored nations clauses" may discourage discounting by the affected seller, may facilitate oligopolistic pricing and deter entry by more efficient competitors. "Most favored nations clauses" are often used as a replacement for innovation or efficiency by large competitors and act as a disincentive for creativity by small competitors. The commission finds that the use of "most favored nations clauses" in contracts between a health care provider or facility and a certified health plan create the potential to thwart the cost containment goals of health care reform. For these reasons, the use of "most favored nations clauses" in contracts between a health care provider or facility and a certified health plan is prohibited.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-045, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-045, filed 2/1/95, effective 10/1/95.]

WAC 246-25-050 Exclusive dealing clauses—Policy statement. (1) Exclusive dealing clauses in health care pro-

[Title 246 WAC—p. 108]

vider and facility contracts with certified health plans may enhance the quality of health services, achieve economic efficiencies, or improve the cost-effective use of health services and equipment. Exclusive dealing clauses may also reduce competition among certified health plans, providers, and facilities when the clauses prevent other competitors from entering the relevant market, thereby increasing the probability of the creation of a monopoly in that market.

(2) A contract between a certified health plan and a health care facility or provider may not contain an exclusive dealing clause if the plan holds more than forty percent of the relevant market.

(3) A contract between a certified health plan and a health care facility or provider may contain an exclusive dealing clause if the plan holds twenty percent or less of the relevant market.

(4) A contract between a certified health plan and a health care facility or provider may contain an exclusive dealing clause if the plan holds between twenty and forty percent of the relevant market and the commission has explicitly permitted its use. To obtain such approval, a plan must request an informal opinion as to use of the clause in the particular circumstances or seek approval by written petition pursuant to the procedures set forth in WAC 245-02-110, et seq.

(5) A contract between a health care network and a health care facility or provider may not contain an exclusive dealing clause if the health care network holds more than forty percent of the relevant market.

(6) A contract between a health care network and a health care facility or provider may contain an exclusive dealing clause if the health care network holds twenty percent or less of the relevant market.

(7) A contract between a health care network and a health care facility or provider may contain an exclusive dealing clause if the network holds between twenty and forty percent of the relevant market and the commission has explicitly permitted its use. To obtain such approval, a network must request an informal opinion as to use of the clause in the particular circumstances or seek approval by written petition pursuant to the procedures set forth in WAC 245-02-110, et seq.

(8) The provisions of this section do not apply to contracts between a staff or group model health maintenance organization and its health care facilities or providers.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-050, filed 1/28/99, effective 1/28/99; 95-04-115, § 245-02-050, filed 2/1/95, effective 10/1/95.]

PROCEDURAL RULES

WAC 246-25-100 Purpose. The purpose of WAC 245-02-110 through 245-02-175 is to implement RCW 43.72.310 by setting forth the form and procedure for: (1) Requests for informal opinions from the attorney general as to whether particular conduct is authorized by the act, and (2) written petitions to the commission requesting approval of conduct that could tend to lessen competition in a relevant market.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-100, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-100, filed 2/1/95, effective 3/4/95.]

(2003 Ed.)

WAC 246-25-110 Form of petition and request for informal opinion. A petition, request for informal opinion, or request for adjudicatory proceeding shall adhere generally to the following form:

(1) At the top of the page shall appear the wording "before the Washington Health Services Commission." On the left side of the page, below the foregoing, the following caption shall be set out "In the Matter of (name of applicant)." Opposite the foregoing caption shall appear the words "petition," or "request for informal opinion," or, "request for adjudicatory proceeding," whichever is applicable.

(2) The materials required by WAC 245-02-115 through 245-02-125 shall be attached to the foregoing.

(3) The petition or request shall be signed and dated by the entity named in the first paragraph, or by its attorney. The original and five copies shall be filed with the commission as described in WAC 245-02-130.

(4) Information required by this chapter may be submitted in hard copy or in machine readable form:

(a) If hard copy, documents shall be submitted and organized by request;

(b) If in machine readable form, the data should comply with specifications acceptable to the commission and attorney general, which will be provided upon request.

[Statutory Authority: RCW 43.72.310, 99-04-049, recodified as § 246-25-110, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-110, filed 2/1/95, effective 3/4/95.]

WAC 246-25-115 Contents of requests for informal opinions and written petitions. The following information shall accompany any written petition or request for informal opinion submitted to the commission:

(1) **Identification of parties.** Identify all parties to the proposal, and their parent entities, and for each one state:

(a) The name(s) under which it is doing business, or proposes to do business, in Washington;

(b) Its business address(es);

(c) Its type of business organization (for example, corporation, sole proprietorship, partnership, or association);

(d) A brief description of the nature or type of business conducted at each of its business locations within the state of Washington; and

(e) The person to whom questions regarding the request or petition should be directed.

(2) **Nature and description of proposal.** State or describe:

(a) The nature and type of transaction (for example, joint venture, acquisition, or merger)

(b) The business(es) involved or affected;

(c) The products and services involved or affected;

(d) The scheduled timeline, including expected dates of any major events required to consummate the proposed activity;

(e) The geographic area(s) in which business will be conducted;

(f) Whether the same products or services as those listed in (c), above, are currently offered within thirty miles of the geographic area(s) identified in (e), above, and if so, by whom; and

(2003 Ed.)

(g) The extent to which the participants share substantial risk including, but not limited to: (1) The extent to which the venture agrees to provide services on a capitated basis, or (2) the extent to which the venture creates significant financial incentives for its participants as a group to achieve specified cost containment goals, such as withholding a substantial amount of compensation due to participants, with distribution of that amount to participants only if the cost containment goals are met.

(h) A general description of any anticipated impact of the proposal on competition, including but not limited to the description of the business(es) involved or affected, the effect upon the parties in their competition with each other, the changes in market share among certified plans, health care providers or health care facilities in the geographic product or service area, the presence and entry of new market participants sufficient to deter or counteract the anti-competitive effects of the proposed activity, and availability of arrangements less restrictive to competition that would achieve the same or similar benefits to the community in health care delivery.

(i) The exclusive or nonexclusive nature of the proposal including, but not limited to (1) the extent to which viable competing networks or plans with adequate provider participation currently exist in the market, (2) the extent to which providers in the proposed network actually participate in other networks or contract individually with health benefit plans, or other evidence of their willingness and incentives to do so, (3) the extent to which providers in the proposed network will earn substantial revenue outside the network, (4) the absence of any indication of significant departicipation from other networks in the market as a result of the proposed venture, and (5) the absence of any indications of coordination among the providers in the network regarding price or other competitively significant terms of participation in other networks or plans.

(3) **Simultaneous review.** Identify any other state or federal agency reviewing the proposal and state the date on which each review was requested.

(4) Identify the name and address of all employee organizations representing the applicant's employees.

(5) **Description of how conduct will meet the goals of health care reform.** Describe in narrative form how the proposal will:

(a) Enhance the quality, access and cost of health services to consumers;

(b) Gain cost efficiency in the provision of health services;

(c) Improve utilization of health services, facilities and equipment;

(d) Avoid duplication of health services resources;

(e) Facilitate the exchange of information relating to performance expectations;

(f) Develop comprehensive, integrated, and cost-effective health services delivery in the geographic, product or service area;

(g) Reduce competition among certified health plans, health care providers, or health care facilities;

(h) Have an impact on the quality, availability, or price of health services to consumers;

(i) Reduce the number of people employed or otherwise impact how employees deliver health care services; and

(j) Change or otherwise have an impact on employee to patient ratios and how this will affect the quality of health services available to consumers.

[Statutory Authority: RCW 43.72.310, 99-04-049, recodified as § 246-25-115, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-115, filed 2/1/95, effective 3/4/95.]

WAC 246-25-120 Continuing oversight and reporting requirements. Written petitions and requests for informal opinions must include, in narrative form, a description of the nature of the continued supervision and oversight the parties' believe would be necessary and appropriate to ensure the proposal continues to be consistent with the petition or request and that its benefits continue to outweigh its disadvantages. The description shall include a recommendation for the form of annual or more frequent progress reports appropriate to the transaction and sufficient to allow the commission and attorney general to evaluate the continuing conduct.

[Statutory Authority: RCW 43.72.310, 99-04-049, recodified as § 246-25-120, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-120, filed 2/1/95, effective 3/4/95.]

WAC 246-25-125 Additional information. An applicant shall submit additional relevant information it believes is sufficient to support its petition or request for an informal opinion. The commission or attorney general may require the submission of additional information as may be required to complete the analysis necessary to form an opinion or respond to a written petition. Depending on the size, scope and nature of the proposed transaction, the material may include some or all of the following:

(1) Contracts, agreements, correspondence, corporate minutes, memoranda, or other documents describing the proposal;

(2) Financial statements for the parties to the proposal for the most recent fiscal year;

(3) Documents filed with any other state or federal agency with respect to the proposal;

(4) Plans, studies, or reports prepared in anticipation of the proposal;

(5) The parties' and their parent organizations' articles of incorporation, bylaws, and documents sufficient to identify the names of the parties' board of directors, owners, and officers; and

(6) Advertisements, brochures, or other publications used for marketing the parties' products or services within the state of Washington during the last fiscal year.

If the proposal includes collaboration between parties, including but not limited to mergers or joint ventures, the commission or the attorney general may request some or all of the following additional information depending on the size, scope, and nature of the proposed transaction:

(1) Each participant's contribution of capital, equipment, or other value to the transaction;

(2) Each participant's ownership interest and its expected consideration or return from the proposal;

(3) Each participant's nonmonetary involvement in the arrangement;

[Title 246 WAC—p. 110]

(4) The market share of each participant in the proposed collaborative effort, for each of the products sold by that participant, identifying the relevant geographic market; and

(5) A statement describing whether arrangements less restrictive to competition would achieve the same or similar benefits as those described in response to section (4) above.

If the proposal is for the merger of acute care inpatient hospitals, the commission or the attorney general may request some or all of the following additional information for the three years prior to the proposed merger, depending on the size, scope, or nature of the proposed merger:

(1) Data reported to the Comprehensive Hospital Abstract Reporting System (CHARS), in computerized form if possible;

(2) Copies of the parties' responses to the American Hospital Association's Annual Hospital Survey;

(3) The identities of the ten largest purchasers of hospital services for each hospital; and

(4) The average number of licensed, staffed, and occupied beds for each year.

[Statutory Authority: RCW 43.72.310, 99-04-049, recodified as § 246-25-125, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-125, filed 2/1/95, effective 3/4/95.]

WAC 246-25-130 Submission of information. (1) The applicant requesting an informal opinion or submitting a written petition shall direct the request or written petition to the Chair of the Commission at the Washington Health Services Commission, P.O. Box 41185, Olympia, Washington 98504-1185. Upon receipt of an informal opinion request or written petition, the commission will send a copy of the request or written petition to the Office of the Attorney General, Antitrust Section, 900 Fourth Avenue, Suite 2000, Seattle, Washington 98164-1012.

(2) The applicant shall also send a copy of the petition and request for informal opinion to any organization representing employees of the applicant.

(3) Each petition and request for informal opinion shall contain a certificate from each person submitting information stating that the information submitted is true and accurate to the best of that person's knowledge.

[Statutory Authority: RCW 43.72.310, 99-04-049, recodified as § 246-25-130, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-130, filed 2/1/95, effective 3/4/95.]

WAC 246-25-131 Public notice and comment. (1) The commission may solicit comments from the public on the petition, request for informal opinion or request for adjudicatory proceeding by causing notice to be published in the state register of the subject matter of a petition, request for informal opinion or request for adjudicatory proceeding, and indicating how, when and where persons may comment.

(2) No later than three days after its publication in the state register, the commission shall cause a copy of the notice of a petition, request for informal opinion or request for adjudicatory proceeding to be mailed to each person who has made a request to the agency for a mailed copy of such notice. The commission will charge for the actual cost of providing individual mailed copies of these notices.

(2003 Ed.)

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-131, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-131, filed 2/1/95, effective 3/4/95.]

WAC 246-25-135 Commission to provide copy of informal opinion to applicant. (1) Within five days of receipt of an attorney general's informal opinion requested by the commission under RCW 43.72.310(1), the commission shall mail a copy of the informal opinion to the requesting applicant. The applicant shall provide a copy of the informal opinion to the employee organizations representing the applicant's employees.

(2) No later than three days after its mailing of a copy of the informal opinion to the requesting party, the commission shall cause a copy of the attorney general's informal opinion to be mailed to each person who has made a request to the agency for a mailed copy. The commission may charge for the actual cost of providing individual mailed copies of these informal opinions.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-135, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-135, filed 2/1/95, effective 3/4/95.]

WAC 246-25-140 Attorney general to provide informal opinion and advice on petitions to the commission. As required by RCW 43.72.310(1), the attorney general will respond to a request for an informal opinion, or for advice regarding a written petition. The attorney general shall have discretion over the scope of the informal opinion or advice provided.

(1) An informal opinion rendered by the attorney general pursuant to RCW 43.72.310(1) will include the following:

- (a) A statement of the facts relied upon in the opinion;
- (b) A statement of the issues presented by the applicant;
- (c) The attorney general's analysis; and
- (d) The attorney general's conclusion as to whether the proposed conduct is authorized by chapter 43.72 RCW.

(2) If the attorney general concludes that the proposed conduct is authorized, the informal opinion will include the following, taking into account the size, scope, and nature of the proposed conduct:

(a) A general description of the nature of the continued supervision and oversight the attorney general believes is necessary and appropriate to ensure the proposal continues to be authorized by chapter 43.72 RCW and that its benefits continue to outweigh its disadvantages;

(b) A general description of the form of annual, or more frequent, progress reports the attorney general believes is appropriate to the transaction and sufficient to allow the commission and the attorney general to evaluate the continuing conduct; and

(c) An indication of the types of data the attorney general believes are necessary to evaluate continuing conduct.

(3) The informal opinion, and any written advice provided to the commission regarding a written petition, should include an explanation of when and under what conditions the attorney general would commit not to file an antitrust enforcement action if the informal opinion concludes that the proposed conduct is authorized, or if the commission approves the petition.

(2003 Ed.)

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-140, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-140, filed 2/1/95, effective 3/4/95.]

WAC 246-25-145 Applicant may request an adjudicative proceeding or file a petition. An applicant may request an adjudicative proceeding in the following circumstances:

(1) Where the applicant has received an informal opinion pursuant to RCW 43.72.310 and within thirty days of the applicant's receipt of the opinion, the applicant requests an adjudicatory proceeding to determine whether the proposed conduct should be authorized pursuant to RCW 43.72.310 (2)(a) because it is likely to achieve the policy goals of chapter 43.72 RCW and a more competitive alternative is impractical;

(2) If the attorney general concludes in its informal opinion that the conduct proposed is not authorized by chapter 43.72 RCW, the requesting applicant shall have thirty days from the date of receipt of the informal opinion from the commission to file a written petition with the commission requesting approval of conduct that could tend to lessen competition in the relevant market pursuant to RCW 43.72.-310(3). The petition shall constitute an application for an adjudicatory proceeding under RCW 34.05.413; or

(3) Pursuant to RCW 43.72.310(3) an applicant may file a written petition with the commission requesting approval of conduct that could tend to lessen competition in the relevant market regardless of whether it has previously sought an informal opinion. The petition shall constitute an application for an adjudicatory proceeding under RCW 34.05.413.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-145, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-145, filed 2/1/95, effective 3/4/95.]

WAC 246-25-150 Decision not to conduct an adjudication. If the commission decides not to conduct an adjudicative proceeding in response to an application, the commission shall furnish the applicant a copy of its decision in writing, with a brief statement of the commission's reasons and of any administrative review available to the applicant.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-150, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-150, filed 2/1/95, effective 3/4/95.]

WAC 246-25-155 Adjudicative proceeding—Rules of procedure. An application for an adjudicative proceeding shall be accompanied by all of the information required for requests for informal opinions and written petitions, as described in WAC 245-02-115 to 245-02-125. The applicant may incorporate by reference any materials previously provided to the commission or attorney general. Except as set forth in WAC 245-02-160 through 245-02-175, the commission adopts for its use the Model Rules of Procedure set forth in chapter 10-08 WAC.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-155, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-155, filed 2/1/95, effective 3/4/95.]

[Title 246 WAC—p. 111]

WAC 246-25-160 Adjudicative proceedings—Notice of hearing. (1) Within thirty days of receipt of an application for adjudicative proceeding or petition, the commission shall notify the applicant of any obvious errors or omissions, request any additional information it requires and is permitted by law to require regarding the application for adjudicative proceeding or petition, and notify the applicant of the name, mailing address, and telephone number that may be contacted regarding the application.

(2) Within sixty days after receipt of the application, the commission shall commence an adjudicative proceeding by serving notice of hearing on the applicant and all other persons required by RCW 34.05.434; 34.05.417 (1)(b), or decide not to conduct an adjudicative proceeding and furnish the applicant with a copy of its decision in writing, with a brief statement of its reasons for doing so and of any administrative review available.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-160, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-160, filed 2/1/95, effective 3/4/95.]

WAC 246-25-165 Presiding officer. The determination of the presiding officer for an adjudicative proceeding before the commission shall be governed by RCW 34.05.425.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-165, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-165, filed 2/1/95, effective 3/4/95.]

WAC 246-25-170 Commission to retain jurisdiction. A grant or denial of authority to engage in proposed conduct shall be deemed a final order of the commission. Where authorization is granted, the commission shall retain jurisdiction over the applicant for purposes of continuing oversight and supervision as required by RCW 43.72.310(6).

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-170, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-170, filed 2/1/95, effective 3/4/95.]

WAC 246-25-175 Adjudicative proceedings—Reconsideration. A petition for reconsideration of a final order under RCW 34.05.470 shall be filed with the commission.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-175, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-175, filed 2/1/95, effective 3/4/95.]

WAC 246-25-180 Notice of modification or withdrawal of authorization. If at anytime during its ongoing supervision of authorized conduct pursuant to RCW 43.72.-310(6), the commission determines that reason exists to revoke or modify its authorization, the commission shall immediately notify the applicant in writing. An applicant may request an adjudicative proceeding within thirty days of receipt of the notice. If no adjudicative hearing is requested by the applicant within thirty days of receipt of the notice, the commission shall immediately revoke or modify its authorization.

[Statutory Authority: RCW 43.72.310. 99-04-049, recodified as § 246-25-180, filed 1/28/99, effective 1/28/99; 95-04-112, § 245-02-180, filed 2/1/95, effective 3/4/95.]

[Title 246 WAC—p. 112]

Chapter 246-50 WAC COORDINATED QUALITY IMPROVEMENT PROGRAM

WAC

246-50-001	Purpose and scope.
246-50-010	Definitions.
246-50-020	Coordinated quality improvement program—Components.
246-50-030	Approval process—Public disclosure.
246-50-040	Alternative programs.
246-50-990	Fees.

WAC 246-50-001 Purpose and scope. (1) This chapter establishes the criteria and approval process for health care entities who choose to apply for a department of health approved coordinated quality improvement program pursuant to RCW 43.70.510. Coordinated quality improvement programs approved by the department are provided discovery limitations pursuant to RCW 43.70.510 (3) and (4). Information and documents created specifically for, and collected and maintained by an approved quality improvement committee are also exempt from disclosure under chapter 42.17 RCW.

(2) This chapter allows health care provider groups, professional societies or organizations, health care service contractors, health maintenance organizations, health carriers approved pursuant to chapter 48.43 RCW, and any other person or entity providing health care coverage under chapter 48.42 RCW that is subject to the jurisdiction and regulation of any state agency or any subdivision thereof and health care institutions and medical facilities other than hospitals, to maintain a department-approved coordinated quality improvement program for the purpose of improving the quality of health care and identifying and preventing health care malpractice.

(3) Programs submitted for department approval should be consistent with the principles for the continuous improvement of the Washington state health care system published by the health care policy board.

(4) This chapter does not apply to hospital quality improvement programs required by RCW 70.41.200.

[Statutory Authority: RCW 43.70.510. 96-09-042, § 246-50-001, filed 4/11/96, effective 5/12/96; 94-24-001, § 246-50-001, filed 11/23/94, effective 12/24/94.]

WAC 246-50-010 Definitions. The words and phrases in this chapter have the following meanings unless the context clearly indicates otherwise.

(1) "Alternative program" means a coordinated quality improvement program determined by the department to be substantially equivalent to RCW 70.41.200(1).

(2) "Department" means the Washington state department of health.

(3) "Governing body" means:

(a) The person, persons or board responsible for the health care entity; or

(b) In the case of a provider group where no person, persons or board is in charge of all providers; the person, persons or group identified by the provider group to be responsible for the coordinated quality improvement program.

(4) "Health care entity" means a health care institution, medical facility, provider group, professional society or organization, health care service contractors, health maintenance

organizations, health carriers approved pursuant to chapter 48.43 RCW, and any other person or entity providing health care coverage under chapter 48.42 RCW that is subject to the jurisdiction of any state agency or any subdivision thereof, authorized by RCW 43.70.510 to have a department-approved coordinated quality improvement program.

(5) "Health care institution" or "medical facility" includes the following:

(a) Adult residential rehabilitation centers regulated pursuant to chapter 71.12 RCW;

(b) Alcoholism treatment facilities regulated pursuant to chapters 71.12 and 70.96A RCW;

(c) Alcoholism hospitals regulated pursuant to chapters 71.12 and 70.96A RCW;

(d) Ambulance and aid services regulated pursuant to chapter 18.73 RCW;

(e) Boarding homes regulated pursuant to chapter 18.20 RCW;

(f) Childbirth centers regulated pursuant to chapter 18.46 RCW;

(g) Community mental health centers regulated pursuant to chapter 71.05 or 71.24 RCW;

(h) Eye banks regulated pursuant to RCW 68.50.630;

(i) Home health agencies regulated pursuant to chapter 70.127 RCW;

(j) Hospice care centers regulated pursuant to chapter 70.41 RCW;

(k) Hospice agencies regulated pursuant to chapter 70.127 RCW;

(l) Medical test sites regulated pursuant to chapter 70.42 RCW;

(m) Nursing homes regulated pursuant to chapter 18.51 RCW;

(n) Pharmacies regulated pursuant to chapter 18.64 RCW;

(o) Private psychiatric hospitals regulated pursuant to chapter 71.12 RCW;

(p) Residential treatment facilities for psychiatrically impaired children and youth regulated pursuant to chapter 71.12 RCW;

(q) Rural health facilities regulated pursuant to chapter 70.175 RCW;

(r) Facilities owned and operated by a political subdivision or instrumentality of the state, including, but not limited to:

(i) Public health departments;

(ii) Fire districts and departments;

(iii) Soldiers' and veterans' homes;

(iv) State mental health institutions;

(v) Health clinics operated by educational institutions;

(vi) Department of corrections health care facilities;

(vii) County jail health clinics; and

(viii) County drug and alcohol treatment facilities;

(s) Facilities required by federal law and implementing regulations, including, but not limited to:

(i) Native American health facilities; and

(ii) Veterans' affairs health services; and

(t) Other facilities determined by the department to be within the parameters of the definition of "health care facility" in RCW 43.72.010.

(6) "Health care provider" or "provider" means:

(a) A person regulated under Title 18 RCW to practice health or health related services or otherwise practicing health care services in this state consistent with state law; or

(b) An employee or agent of a person described in (a) of this subsection, acting in the course and scope of the employee's or agent's employment performing health care or auxiliary services.

(7) "Health care provider group" or "provider group" means an organized body of ten or more providers.

(8) "Negative health care outcome" means a patient death or impairment of bodily function other than those related to the natural course of illness, disease or proper treatment in accordance with generally accepted health care standards.

(9) "Professional society or organization" means a group of health care professionals, including, but not limited to, state or local health care professional associations.

(10) "Program" means coordinated quality improvement program pursuant to RCW 43.70.510.

[Statutory Authority: RCW 43.70.510, 96-09-042, § 246-50-010, filed 4/11/96, effective 5/12/96; 94-24-001, § 246-50-010, filed 11/23/94, effective 12/24/94.]

WAC 246-50-020 Coordinated quality improvement program—Components. A program under the provisions of RCW 43.70.510 shall include, at a minimum:

(1) The following components:

(a) A governing body;

(b) A committee, appointed by the governing body, with a broad representation of the services offered, responsible for:

(i) Reviewing services rendered, both retrospectively and prospectively, to improve the quality of health care by measuring key characteristics such as effectiveness, accuracy, timeliness, and cost;

(ii) Reviewing categories and methodologies of services rendered and to be rendered with the goal of improving health care outcomes;

(iii) Overseeing and coordinating the program;

(iv) Ensuring information gathered for the program is reviewed and used to revise health care policies and procedures; and

(v) Reporting to the governing body, at least semiannually, on program activities and actions taken as a result of those activities;

(c) Periodic evaluation of each provider under the purview of the program, including mental and physical capacity, competence in delivering health care, and verification of current credentials;

(d) A procedure for promptly resolving all complaints pertaining to accidents, injuries, treatment and other events that may result in claims of health care malpractice;

(e) A method for continually collecting and maintaining information concerning:

(i) Experience with negative health care outcomes and injurious incidents; and

(ii) Professional liability premiums, settlements, awards, costs for injury prevention and safety improvement activities;

(f) A method for maintaining information gathered under the purview of the program concerning a provider in that provider's personnel or credential file, assuring patient confidentiality;

(g) A process for reporting accidents, injuries, negative health outcomes, and other pertinent information to the quality improvement committee;

(h) A process assuring compliance with reporting requirements to appropriate local, state and federal authorities;

(i) A method for identifying documents and records created specifically for and collected and maintained by the quality improvement committee;

(j) Educational activities for personnel engaged in health care activities, including, but not limited to:

(i) Quality improvement;

(ii) Safety and injury prevention;

(iii) Responsibilities for reporting professional misconduct;

(iv) Legal aspects of providing health care;

(v) Improving communication with health care recipients; and

(vi) Causes of malpractice claims; or

(2) Components determined by the department to be substantially equivalent to subsection (1) of this section.

[Statutory Authority: RCW 43.70.510. 94-24-001, § 246-50-020, filed 11/23/94, effective 12/24/94.]

WAC 246-50-030 Approval process—Public disclosure. (1) A health care entity seeking department approval of a program shall submit to the department:

(a) An application on forms provided by the department;

(b) The program plan, printed on 8 1/2 by 11 inch paper, including:

(i) A table of contents clearly denoting, at a minimum, where each component specified in WAC 246-50-020 is located within the program plan; and

(ii) A detailed description of every aspect of the program;

(c) The fee specified in WAC 246-50-990; and

(d) Other information as may be required by the department.

(2) To maintain department approval, a health care entity modifying the scope, components or operation of an approved program, shall submit to the department:

(a) An application package specified in subsection (1) of this section; and

(b) A detailed description of the modification and how it affects the program.

(3) The department shall review each application package submitted pursuant to this section, and:

(a) Send written notification of approval to a health care entity submitting a program with the components specified in WAC 246-50-020; or

(b) Provide the health care entity an opportunity for a brief adjudicative proceeding according to RCW 34.05.482 when the department declines to approve a program.

(4) The department shall retain a copy of the program plan. Material received by the department will be subject to the public disclosure law, chapter 42.17 RCW. Health care

entities submitting material that they believe is exempt from public disclosure should conspicuously mark the portion or portions and state the basis for exemption. The department will give notice to the submitting entity of any request under the Public Disclosure Act for public disclosure of material that has been marked in accordance with this subsection at least ten working days in advance of releasing the information. This will allow the submitting party to invoke the provisions of RCW 42.17.330.

[Statutory Authority: RCW 43.70.510. 94-24-001, § 246-50-030, filed 11/23/94, effective 12/24/94.]

WAC 246-50-040 Alternative programs. A health care entity seeking department approval of an alternative program shall submit to the department, in addition to the items specified in WAC 246-50-030(1), verification of certification or accreditation by an organization approved by the department.

[Statutory Authority: RCW 43.70.510. 94-24-001, § 246-50-040, filed 11/23/94, effective 12/24/94.]

WAC 246-50-990 Fees. A health care entity shall submit a fee with each application for department approval as follows:

(1) A coordinated quality improvement program pursuant to WAC 246-50-030(1) — two hundred fifty dollars;

(2) An alternative program pursuant to WAC 246-50-040 — forty dollars; and

(3) Modification of a department-approved program pursuant to WAC 246-50-030(2) — sixty-five dollars.

[Statutory Authority: RCW 43.70.510. 94-24-001, § 246-50-990, filed 11/23/94, effective 12/24/94.]

Chapter 246-100 WAC COMMUNICABLE AND CERTAIN OTHER DISEASES

WAC

246-100-006	Purpose.
246-100-011	Definitions.
246-100-021	Responsibilities and duties—Health care providers.
246-100-036	Responsibilities and duties—Local health officers.
246-100-072	Rules for notification of partners at risk of HIV infection.
246-100-166	Immunization of child care and school children against certain vaccine-preventable diseases.
246-100-186	Special settings—Health care facilities.
246-100-191	Animals, birds, pets—Measures to prevent human disease.
246-100-201	Birds—Measures to prevent psittacosis.
246-100-206	Special diseases—Sexually transmitted diseases.
246-100-207	Human immunodeficiency virus (HIV) testing—Ordering—Laboratory screening—Interpretation—Reporting.
246-100-208	Counseling standard—AIDS counseling.
246-100-209	Counseling standards—Human immunodeficiency virus (HIV) pretest counseling—HIV post-test counseling.
246-100-211	Special diseases—Tuberculosis.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-100-016	Confidentiality. [Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-016, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 43.20.050 and 70.24.130. 92-02-019 (Order 225B), § 246-100-016, filed 12/23/91, effective 1/23/92. Statu-
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- 246-100-026 tory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-016, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.24.105. 90-07-033 (Order 043), § 248-100-016, filed 3/14/90, effective 4/14/90. Statutory Authority: Chapter 70.24 RCW. 88-21-093 (Order 322), § 248-100-016, filed 10/19/88; 88-17-057 (Order 317), § 248-100-016, filed 8/17/88. Statutory Authority: RCW 43.20.050. 87-11-047 (Order 302), § 248-100-016, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-031 Responsibilities and duties—Veterinarians. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-026, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-026, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-026, filed 3/16/88.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-031 Responsibilities and duties—Laboratory directors. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-031, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-031, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-031, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-041 Responsibilities and duties—State health officer. [Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-041, filed 8/13/99, effective 9/1/99. Statutory Authority: Chapter 70.24 RCW. 93-08-036 (Order 354B), § 246-100-041, filed 4/1/93, effective 5/2/93. Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-041, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-041, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-041, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-042 Reporting of blood lead levels. [Statutory Authority: RCW 43.20.050. 99-11-037, § 246-100-042, filed 5/13/99, effective 5/14/99; 96-11-077, § 246-100-042, filed 5/13/96, effective 6/13/96. Statutory Authority: RCW 43.20.050(3). 93-10-038 (Order 358), § 246-100-042, filed 4/28/93, effective 5/29/93.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-043 Surveillance report to the board—State health officer. [Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-043, filed 8/13/99, effective 9/1/99.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-046 Responsibilities and duties—Cases, suspected cases, carriers, contacts, and others. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-046, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-046, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-046, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-071 Responsibility for reporting to and cooperating with the local health department. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-071, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-071, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-071, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-076 Reportable diseases and conditions. [Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-076, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 70.28.032. 96-23-064, § 246-100-076, filed 11/20/96, effective 12/21/96. Statutory Authority: Chapter 70.24 RCW. 93-08-036 (Order 354B), § 246-100-076, filed 4/1/93, effective 5/2/93. Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-076, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-076, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-076, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010.
- 246-100-081 Reports—Content—Time—Hospital monthly report permitted for certain diseases. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-081, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-081, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-081, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010.
- 246-100-086 Reporting diseases and conditions directly to department. [Statutory Authority: RCW 43.20.050 and 70.104.055. 92-02-019 (Order 225B), § 246-100-086, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-086, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.104 RCW. 90-10-036 (Order 049), § 248-100-086, filed 4/26/90, effective 5/27/90. Statutory Authority: RCW 43.20.050. 87-11-047 (Order 302), § 248-100-086, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-091 Handling of reports by local health department—Handling of reports by department. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-091, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-091, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-171 Special settings—Food service establishments. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-171, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-171, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-171, filed 3/16/88.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-176 Special settings—Schools. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-176, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-176, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-176, filed 3/16/88.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-181 Special settings—Child day care facilities. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-181, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-181, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-181, filed 3/16/88.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-196 Animal bites—Report to local health department. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-196, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-196, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-196, filed 3/16/88.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-216 Special diseases—Surveillance for influenza. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-216, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-216, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.
- 246-100-217 Special condition—Pesticide poisoning. [Statutory Authority: RCW 43.20.050 and 70.104.055. 92-02-019 (Order 225B), § 246-100-217, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-217, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.104 RCW. 90-10-036 (Order 049), § 248-100-217, filed 4/26/90, effective 5/27/90.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 70.104.030.
- 246-100-218 Special condition—Gunshot wounds. [Statutory Authority: RCW 43.70.545. 96-08-028, § 246-100-218, filed 3/27/96, effective 4/27/96.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: 43.70.545.
- 246-100-221 Duties of laboratories—Annual registration of laboratories. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-221, filed

- 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-221, filed 5/19/87.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-100-226 Duties of laboratories—Approval of laboratories to perform prenatal serologic tests for syphilis. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-226, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-226, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-226, filed 5/19/87.] Repealed by 96-19-043, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.20.050.
- 246-100-231 Duties of laboratories—Submission of specimens by laboratories. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-231, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-231, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-231, filed 3/16/88; 87-11-047 (Order 302), § 248-100-231, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010.
- 246-100-236 Duties of laboratories—Reporting of laboratory results indicative of certain reportable diseases. [Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-236, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 70.24.130. 95-13-037, § 246-100-236, filed 6/14/95, effective 7/15/95. Statutory Authority: Chapter 70.24 RCW. 93-08-036 (Order 354B), § 246-100-236, filed 4/1/93, effective 5/2/93. Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-100-236, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-236, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-236, filed 3/16/88; 87-11-047 (Order 302), § 248-100-236, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010.
- 246-100-241 Duties of laboratories—Duty to cooperate with local health departments and the department. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-241, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-241, filed 5/19/87.] Repealed by 00-23-120, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050.

WAC 246-100-006 Purpose. The following rules and regulations are adopted under the authority of chapter 43.20 RCW to protect the health and well-being of the public by controlling communicable and certain other diseases.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-006, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-006, filed 5/19/87.]

WAC 246-100-011 Definitions. The following definitions shall apply in the interpretation and enforcement of chapter 246-100 WAC:

- (1) "Acquired immunodeficiency syndrome (AIDS)" means illness, disease, or conditions defined and described by the Centers for Disease Control, U.S. Public Health Service, Morbidity and Mortality Weekly Report (MMWR), December 18, 1992, Volume 41, Number RR-17. A copy of this publication is available for review at the department and at each local health department.
- (2) "AIDS counseling" means counseling directed toward:
 - (a) Increasing the individual's understanding of acquired immunodeficiency syndrome; and
 - (b) Assessing the individual's risk of HIV acquisition and transmission; and
 - (c) Affecting the individual's behavior in ways to reduce the risk of acquiring and transmitting HIV infection.

- (3) "Board" means the Washington state board of health.
- (4) "Case" means a person, alive or dead, having been diagnosed to have a particular disease or condition by a health care provider with diagnosis based on clinical or laboratory criteria or both.

(5) "Child day care facility" means an agency regularly providing care for a group of children for less than twenty-four hours a day and subject to licensing under chapter 74.15 RCW.

(6) "Communicable disease" means an illness caused by an infectious agent which can be transmitted from one person, animal, or object to another person by direct or indirect means including transmission via an intermediate host or vector, food, water, or air.

(7) "Department" means the Washington state department of health.

(8) "Detention" or "detainment" means physical restriction of activities of an individual by confinement, consistent with WAC 246-100-206(8), for the purpose of monitoring and eliminating behaviors presenting imminent danger to public health and may include physical plant, facilities, equipment, and/or personnel to physically restrict activities of the individual to accomplish such purposes.

(9) "Health care facility" means:

(a) Any facility or institution licensed under chapter 18.20 RCW, boarding home, chapter 18.46 RCW, birthing centers, chapter 18.51 RCW, nursing homes, chapter 70.41 RCW, hospitals, or chapter 71.12 RCW, private establishments, clinics, or other settings where one or more health care providers practice; and

(b) In reference to a sexually transmitted disease, other settings as defined in chapter 70.24 RCW.

(10) "Health care provider" means any person having direct or supervisory responsibility for the delivery of health care who is:

(a) Licensed or certified in this state under Title 18 RCW; or

(b) Is military personnel providing health care within the state regardless of licensure.

(11) "HIV testing" means conducting a laboratory test or sequence of tests to detect the human immunodeficiency virus (HIV) or antibodies to HIV performed in accordance with requirements to WAC 246-100-207. To assure that the protection, including but not limited to, pre- and post-test counseling, consent, and confidentiality afforded to HIV testing as described in chapter 246-100 WAC also applies to the enumeration of CD4+ (T4) lymphocyte counts (CD4+ counts) and CD4+ (T4) percents of total lymphocytes (CD4+ percents) when used to diagnose HIV infection, CD4+ counts and CD4+ percents will be presumed HIV testing except when shown by clear and convincing evidence to be for use in the following circumstances:

- (a) Monitoring previously diagnosed infection with HIV;
- (b) Monitoring organ or bone marrow transplants;
- (c) Monitoring chemotherapy;
- (d) Medical research; or
- (e) Diagnosis or monitoring of congenital immunodeficiency states or autoimmune states not related to HIV.

The burden of proving the existence of one or more of the circumstances identified in (a) through (e) of this subsection shall be on the person asserting such existence.

(12) "Isolation" means the separation or restriction of activities of infected persons, or of persons suspected to be infected, from other persons to prevent transmission of the infectious agent.

(13) "Local health department" means the city, town, county, or district agency providing public health services to persons within the area, as provided in chapters 70.05 and 70.08 RCW.

(14) "Local health officer" means the individual having been appointed under chapter 70.05 RCW as the health officer for the local health department, or having been appointed under chapter 70.08 RCW as the director of public health of a combined city-county health department.

(15) "Nosocomial infection" means an infection acquired in a hospital or other health care facility.

(16) "Outbreak" means the occurrence of cases of a disease or condition in any area over a given period of time in excess of the expected number of cases.

(17) "Post-test counseling" means counseling after the HIV test when results are provided and directed toward:

(a) Increasing the individual's understanding of human immunodeficiency virus (HIV) infection;

(b) Affecting the individual's behavior in ways to reduce the risk of acquiring and transmitting HIV infection;

(c) Encouraging the individual testing positive to notify persons with whom there has been contact capable of spreading HIV;

(d) Assessing emotional impact of HIV test results; and

(e) Appropriate referral for other community support services.

(18) "Pretest counseling" means counseling provided prior to HIV testing and aimed at:

(a) Helping an individual to understand:

(i) Ways to reduce the risk of human immunodeficiency virus (HIV) transmission;

(ii) The nature, purpose, and potential ramifications of HIV testing;

(iii) The significance of the results of HIV testing; and

(iv) The dangers of HIV infection; and

(b) Assessing the individual's ability to cope with the results of HIV testing.

(19) "Principal health care provider" means the attending physician or other health care provider recognized as primarily responsible for diagnosis and treatment of a patient or, in the absence of such, the health care provider initiating diagnostic testing or therapy for a patient.

(20) "Quarantine" means the separation or restriction on activities of a person having been exposed to or infected with an infectious agent, to prevent disease transmission.

(21) "School" means a facility for programs of education as defined in RCW 28A.210.070 (preschool and kindergarten through grade twelve).

(22) "Sexually transmitted disease (STD)" means a bacterial, viral, fungal, or parasitic disease or condition which is usually transmitted through sexual contact, including:

(a) Acute pelvic inflammatory disease;

(b) Chancroid;

(c) Chlamydia trachomatis infection;

(d) Genital and neonatal herpes simplex;

(e) Genital human papilloma virus infection;

(f) Gonorrhea;

(g) Granuloma inguinale;

(h) Hepatitis B infection;

(i) Human immunodeficiency virus infection (HIV) and acquired immunodeficiency syndrome (AIDS);

(j) Lymphogranuloma venereum;

(k) Nongonococcal urethritis (NGU); and

(l) Syphilis.

(23) "Spouse" means any individual who is the marriage partner of an HIV-infected individual, or who has been the marriage partner of the HIV-infected individual within the ten-year period prior to the diagnosis of HIV-infection, and evidence exists of possible exposure to HIV.

(24) "State health officer" means the person designated by the secretary of the department to serve as statewide health officer, or, in the absence of such designation, the person having primary responsibility for public health matters in the state.

(25) "Suspected case" means a person whose diagnosis is thought likely to be a particular disease or condition with suspected diagnosis based on signs and symptoms, laboratory evidence, or both.

(26) "Veterinarian" means an individual licensed under provisions of chapter 18.92 RCW, veterinary medicine, surgery, and dentistry and practicing animal health care.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-100-011, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 70.24.022, [70.24].340 and Public Law 104-146. 97-15-099, § 246-100-011, filed 7/21/97, effective 7/21/97. Statutory Authority: Chapter 70.24 RCW. 93-08-036 (Order 354B), § 246-100-011, filed 4/1/93, effective 5/2/93. Statutory Authority: RCW 43.20.050 and 70.24.130. 92-02-019 (Order 225B), § 246-100-011, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-011, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW. 89-07-095 (Order 325), § 248-100-011, filed 3/22/89; 88-17-057 (Order 317), § 248-100-011, filed 8/17/88. Statutory Authority: RCW 43.20.050. 88-07-063 (Order 308), § 248-100-011, filed 3/16/88; 87-11-047 (Order 302), § 248-100-011, filed 5/19/87.]

WAC 246-100-021 Responsibilities and duties—Health care providers. Every health care provider, as defined in chapter 246-100 WAC, shall:

(1) Provide adequate, understandable instruction in control measures designed to prevent the spread of disease to:

(a) Each patient with a communicable disease under his or her care; and

(b) Others as appropriate to prevent spread of disease.

(2) Cooperate with public health authorities during investigation of:

(a) Circumstances of a case or suspected case of a notifiable condition or other communicable disease; and

(b) An outbreak or suspected outbreak of illness.

Comply with requirements in WAC 246-100-206, 246-100-211, and chapter 246-101 WAC.

(3) Use protocols established in *Communicable Diseases Manual*, seventeenth edition, James Chin, MD, MPH, editor, 2000, when treating wounds caused by animal bites. A copy of this publication is available for review at the department and at each local health department.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-100-021, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 43.20.050, 70.24.130 and 70.104.055. 92-02-019 (Order 225B), § 246-100-021, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-021, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.104 RCW. 90-10-036 (Order 049), § 248-100-021, filed 4/26/90, effective 5/27/90. Statutory Authority: RCW 43.20.050. 87-11-047 (Order 302), § 248-100-021, filed 5/19/87.]

WAC 246-100-036 Responsibilities and duties—

Local health officers. (1) The local health officer shall review and determine appropriate action for:

Instituting disease prevention and infection control, isolation, detention, and quarantine measures necessary to prevent the spread of communicable disease, invoking the power of the courts to enforce these measures when necessary.

(2) Local health officers shall:

(a) Notify health care providers within the health district regarding requirements in this chapter;

(b) Ensure anonymous HIV testing is reasonably available;

(c) Make HIV testing, AIDS counseling, and pretest and post-test counseling, as defined in this chapter, available for voluntary, mandatory, and anonymous testing and counseling as required by RCW 70.24.400;

(d) Make information on anonymous HIV testing, AIDS counseling, and pretest and post-test counseling, as described under WAC 246-100-208 and 246-100-209, available;

(e) Use identifying information on HIV-infected individuals provided according to chapter 246-101 WAC only:

(i) For purposes of contacting the HIV-positive individual to provide test results and post-test counseling; or

(ii) To contact persons who have experienced substantial exposure, including sex and injection equipment-sharing partners, and spouses; or

(iii) To link with other name-based public health disease registries when doing so will improve ability to provide needed care services and counseling and disease prevention; and

(f) Destroy documentation of referral information established in WAC 246-100-072 and this subsection containing identities and identifying information on HIV-infected individuals and at-risk partners of those individuals immediately after notifying partners or within three months, whichever occurs first.

(3) Local health officers shall conduct investigations and institute control measures consistent with those indicated in the seventeenth edition, 2000, of *Communicable Diseases Manual*, James Chin, MD, MPH, editor, except:

(a) When superseded by more up-to-date measures, or

(b) When other measures are more specifically related to Washington state.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-100-036, filed 11/22/00, effective 12/23/00. Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-036, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 70.24.022, [70.24].340 and Public Law 104-146. 97-15-099, § 246-100-036, filed 7/21/97, effective 7/21/97. Statutory Authority: RCW 43.20.050 and 70.24.130. 92-02-019 (Order 225B), § 246-100-036, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-036, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW. 89-02-008 (Order 324), § 248-100-036, filed 12/27/88. Statutory Authority: RCW 43.20.050. 88-07-063 (Order 308), § 248-100-036, filed 3/16/88.]

WAC 246-100-072 Rules for notification of partners at risk of HIV infection. (1) A health care provider may consult with the local health officer or an authorized representative about an HIV-infected individual.

(2) Only under the specific circumstances listed below, a principal health care provider shall report the identity of sex or injection equipment-sharing partners, including spouses, of an HIV-infected individual to the local health officer or an authorized representative:

(a) After being informed of the necessity to notify sex and injection-equipment sharing partners, including spouses, and confirm notification to the health care provider, the HIV-infected individual either refuses or is unable to notify partners that partners:

(i) May have been exposed to and infected with HIV; and

(ii) Should seek HIV-pretest counseling and consider HIV testing; and

(b) The HIV-infected individual neither accepts assistance nor agrees to referral to the local health officer or an authorized representative for assistance in notifying partners.

(3) Only in the specific circumstances listed below, shall a principal health care provider notify the local health officer or an authorized representative to directly contact the HIV-infected person for the purpose of partner notification:

(a) The HIV-infected person agrees to meet with the local health officer or authorized representative; or

(b) The principal health care provider provided pretest counseling as described in WAC 246-100-209(1) before the individual was tested; and

(c) The principal health care provider made efforts, but was unable to meet face-to-face with the individual to notify the individual of the HIV-test result and to provide post-test counseling as required in WAC 246-100-209 in order to assure partner notification.

(4) A health care provider shall not disclose the identity of an HIV-infected individual or the identity of sex and injection equipment-sharing partners, including spouses, at risk of HIV infection, except as authorized in RCW 70.24.105, WAC 246-100-072, or 246-100-076.

(5) Local health officers and authorized representatives shall:

(a) Confirm conditions in subsections (2) and (3) of this section were met prior to initiating partner notification or receiving referral of identity of an HIV-infected individual; and

(b) Use identifying information, provided according to this section, on HIV-infected individuals only for contacting the HIV-infected individual to provide post-test counseling or to contact sex and injection equipment-sharing partners, including spouses; and

(c) Destroy documentation of referral information established under this subsection, containing identities and identifying information on the HIV-infected individual and at-risk partners of that individual, immediately after notifying partners or within three months of the date information was received, whichever occurs first.

[Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-072, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 70.24.022, [70.24].340 and Public Law 104-146. 97-15-099, § 246-100-072,

filed 7/21/97, effective 7/21/97. Statutory Authority: RCW 43.20.050 and 70.24.130, 92-02-019 (Order 225B), § 246-100-072, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-100-072, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW, 89-02-008 (Order 324), § 248-100-072, filed 12/27/88.]

WAC 246-100-166 Immunization of child care and school children against certain vaccine-preventable diseases. (1) Definitions for purposes of this section:

(a) "Certificate of immunization status (CIS) form" means a form provided by the department labeled DOH 348-013, including data entry spaces for immunization information including:

- (i) Name of child or student,
- (ii) Birth date,
- (iii) Gender,
- (iv) Type of vaccine,
- (v) Date of each dose of vaccine received specifying day, month, and year,
- (vi) Signature of parent, legal guardian, or adult in loco parentis, and
- (vii) Documented exemptions, if applicable and as specified in subsection (5) of this section.

(b) "Chief administrator" means:

(i) The person with the authority and responsibility for the immediate supervision of the operation of a school, child care center, or

(ii) A designee of the chief administrator assigned in writing to carry out the requirements of RCW 28A.210.160 through the statutory or corporate board of directors of the school district or school, or

(iii) Person or persons with the authority and responsibility for the general supervision of the operation of the school district or school.

(c) "Child" means any person regardless of age admitted to any child care center, preschool, kindergarten, or grades one through twelve program of education in:

(i) Any public school district, or

(ii) Any private school or private institution subject to approval by the state board of education or described in RCW 28A.305.130 and 28A.195.010 through 28A.195.060, or

(iii) Any licensed child care facility which regularly provides care for a group of thirteen or more children for periods of less than twenty-four hours subject to licensure by the department of social and health services as described in chapter 74.15 RCW.

(d) "Full immunization" means vaccinated in accordance with schedules and immunizing agents approved by the state board of health in WAC 246-100-166 against:

- (i) Diphtheria,
- (ii) Tetanus,
- (iii) Pertussis or whooping cough,
- (iv) Measles or rubeola,
- (v) Rubella,
- (vi) Mumps,
- (vii) Poliomyelitis,
- (viii) Haemophilus influenzae type b disease, and
- (ix) Hepatitis b, after September 1, 1997.

(e) "Immunizing agents" means any vaccine or other biologic licensed and approved by the United States Food and

Drug Administration (FDA), or meeting World Health Organization (WHO) requirements, for immunization of persons against:

- (i) Diphtheria, tetanus, pertussis (DTP, DT, Td);
- (ii) Measles;
- (iii) Mumps;
- (iv) Poliomyelitis, types I, II, and III (TOPV, IPV);
- (v) Rubella;
- (vi) Haemophilus influenzae type b vaccine (Hib); and
- (vii) Hepatitis b.

(f) "National immunization guidelines" means the schedule for immunization described in the "Recommended Childhood Immunization Schedule: United States—January 1995," approved by the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP).

(g) "Parent" means a person who is:

- (i) The mother, father, legal guardian, or any adult in loco parentis of a child seventeen years of age or younger; or
- (ii) A person eighteen years of age or older; or
- (iii) An emancipated minor.

(h) "Transfer student" means a student previously enrolled in grades kindergarten through twelve moving from one school district or system to another at any time during the school year, excluding students transferring within a district or system when the school transfers records within the district.

(2) Full immunization schedule. Each child care center, preschool, and school shall establish and maintain requirements for full immunization of children attending child care and preschool through grade twelve.

(3) For child care and preschool children, full immunization means a child received age-appropriate vaccines as enumerated in the National Immunization Guidelines as defined in subsection (1) of this section.

(4) For a child entering kindergarten or first grade (school entry level), full immunization means a child received age-appropriate vaccines as enumerated in the National Immunization Guidelines as defined in subsection (1) of this section.

For transfer students and those above kindergarten or first grade, full immunization means a child received age-appropriate vaccines consistent with the National Immunization Guidelines as defined in subsection (1) of this section (not required of persons eighteen years of age and older).

(5) Conditions for child care, preschool, and school attendance when a child is not fully immunized:

(a) When a child lacks full immunization, the child care center, preschool, or school shall require satisfactory progress toward full immunization (conditional status) as a condition of school attendance including:

(i) Documented proof of start or continuance of child's schedule of immunization;

(ii) Assurance the scheduled immunization is consistent with the national immunization guidelines defined in subsection (1) of this section;

(iii) Notification of child's parent(s) of when the schedule must be completed; and

(iv) Exclusion of child from attendance as described in subsection (9) of this section if child has not received required immunizations on schedule and if sufficient time has elapsed (one month from date due) for completion of next dose.

(6) Schools, preschools, and child care centers shall require documented proof related to immunization including:

(a) Completion of a certificate of immunization status (CIS) form by a parent as documented proof of:

- (i) Full immunization, or
- (ii) Initiation or continuation of a schedule (conditional status), or
- (iii) Exemption.

(b) Information from a written personal immunization record, as the source of the immunization data entered on the CIS form (substitution of a personal immunization record for a CIS form is prohibited);

(c) Acceptance of only the CIS form (no other state or local immunization forms) from new enrollees registering in kindergarten through grade twelve;

(d) In addition to current CIS form, acceptance of previous CIS forms, or locally developed forms approved by the department indicating the month and year of each immunization as the official immunization status for children enrolled prior to September 1, 1979.

(7) Schools, preschools, and child care centers shall accept medical exemptions and:

(a) Require a signature of a licensed medical doctor (M.D.), doctor of osteopathy (D.O.), doctor of naturopathy (N.D.), physician assistant, or nurse practitioner practicing within the limits of the medical or nurse practice acts to certify medical reasons to defer one or more immunizations on the CIS form;

(b) Admit children and keep on file a CIS form for children with:

(i) Temporary exemption from immunization for medical reasons if the required immunizations are received upon expiration of the exemption, or

(ii) Permanent exemptions.

(c) Include a statement on the CIS form informing the parent that should an outbreak of vaccine preventable disease for which the child is exempted occur, the child may be excluded from school or child care for the duration of the outbreak by order of the local health department as described in subsection (9) of this section; and

(d) Keep on file a list of children so exempted and transmit the list to the local health department if requested.

(8) Schools, preschools, and child care centers shall:

(a) Allow a parent to exempt his/her child from the required immunizations for religious, philosophical, or personal objections when the CIS form indicates:

(i) Type or exemption, and

(ii) Signature of parent.

(b) Keep on file a CIS form for each child so enrolled;

(c) Include a statement on the CIS form informing the parent that should an outbreak of vaccine preventable disease for which the child is exempted occur, the child may be excluded from school for the duration of the outbreak by order of the local health department as described in subsection (9) of this section; and

(d) Keep on file a list of children so exempted and transmit the list to the local health department if requested.

(9) Schools, preschools, and child care centers shall exclude children from school as follows:

(a) Exclude any child from school for failure to provide a completed CIS form as defined in subsection (1) of this section before or on the child's first day of attendance consistent with procedures required by the state board of education, Title 180 WAC;

(b) Exclude from attendance any child in a child care center for failure to provide a completed CIS form as defined in subsection (1) of this section before or on the child's first day of attendance;

(c) The chief administrator shall retain records on excluded children for at least three years including:

(i) Name,

(ii) Address, and

(iii) Date of exclusion.

(d) A health officer may exclude children from school, preschool, and child care attendance in the event of a child's exposure to a disease according to chapter 246-110 WAC, including children presenting proof of:

(i) Initiation of a schedule of immunization,

(ii) Medical exemption,

(iii) Religious exemption,

(iv) Philosophical exemption, or

(v) Personal exemption.

(10) Schools, preschools, and child care centers shall maintain records and require:

(a) A completed CIS form retained in the files for every child enrolled;

(b) Return of original CIS form or a legible copy to the parent in the event of the child's withdrawal or transfer from school (withholding a record for any reason, including non-payment of school, preschool, or child care fees is prohibited);

(c) Access to immunization records by agents of the state or local health department for each child enrolled.

(11) Persons or organizations administering immunizations, either public or private, shall:

(a) Furnish each person immunized, or his or her parent, with a written record of immunization containing information required by the state board of health; and

(b) Provide immunizations and records in accordance with chapter 246-100 WAC.

(12) Chief administrators of schools, preschools, and child care centers shall forward a written annual report to the department and local health department on the immunization status of children as follows:

(a) For schools: By November 1 of each year on forms provided by the department (except in the event of a late school opening when the report is due thirty days after the first day of school);

(b) For preschools and child care centers: By February 1 of each year on forms provided by the department.

[Statutory Authority: RCW 28A.210.140. 96-04-079, § 246-100-166, filed 2/7/96, effective 3/9/96. Statutory Authority: RCW 28A.210.140 and 43.20.050. 91-15-066 (Order 182B), § 246-100-166, filed 7/22/91, effective 8/22/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-166, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-166, filed 3/16/88.]

WAC 246-100-186 Special settings—Health care facilities. Health care facilities shall:

(1) Adopt written policy and procedures restricting work of employees, staff, students, and volunteers diagnosed to have a communicable disease from direct contact with patients, residents, and recipients of care during the period of communicability when:

(a) Transmission of the disease to recipients of care or other employees can occur in that particular job environment, and

(b) The disease can cause serious illness.

(2) Permit employees, staff, students, and volunteers to return to work when measures have been taken to prevent transmission of disease if:

(a) Measures are consistent with recommendations of an infection control committee or equivalent authorized group if existing, and

(b) Measures are consistent with recommendations of local health officer.

(3) Comply with applicable state licensure law and department rules regarding communicable disease screening and control.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-186, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-186, filed 3/16/88.]

WAC 246-100-191 Animals, birds, pets—Measures to prevent human disease. (1) All persons and entities are prohibited from:

(a) Sale of milk, meat, hides, and hair from animals infected with anthrax; and

(b) Sale and display of turtles except as permitted under Title 21 CFR, Food and Drug Administration, part 1240.62, 1986.

(2) Except for bonafide public or private zoological parks, persons and entities are prohibited from:

(a) Importing into Washington state any bat, skunk, fox, raccoon, or coyote without a permit from the director of the Washington state department of agriculture, as required in WAC 16-54-125; and

(b) Acquiring, selling, bartering, exchanging, giving, purchasing, or trapping for retention as pets or for export any:

(i) Bat,

(ii) Skunk,

(iii) Fox,

(iv) Raccoon, and

(v) Coyote.

(3) Local health officers shall determine whether or not to order the destroying or testing of animals other than cats and dogs if:

(a) The animal has bitten or otherwise exposed a person, and

(b) Rabies is suspected.

(4) When an animal has bitten or otherwise exposed a person, the local health officer shall institute any or all of the following as judged appropriate:

(a) Order testing and destruction of the animal,

(b) Order restriction of dogs and cats for ten days observation,

(2003 Ed.)

(c) Require examination and recommendation by a veterinarian related to signs of rabies, or

(d) Specify other appropriate actions for animals considered low risk for rabies.

(5) When an animal other than a bat is found to be rabid, the local health officer shall immediately institute a community-wide rabies control program including:

(a) Issuance of orders to pick up and impound all stray and unlicensed dogs and cats,

(b) Issuance of orders to owners of dogs and cats requiring proof of rabies vaccination of animals by a veterinarian within six previous months,

(c) Restriction of household mammals to owners' premises except when on a leash, or

(d) Institute actions other than subsection (5)(a), (b), and (c) of this section when judged appropriate.

(6) A person destroying an animal as described in this section shall:

(a) Avoid damaging the brain; and

(b) Transport the dead animal's head, brain, or body in a manner approved by the local health department.

(7) To improve surveillance for rabies, laboratories shall inform the local health officer prior to testing specimens and samples for rabies.

(8) When a cat or dog has been bitten or exposed to a rabid or suspected rabid animal, the local health officer shall require:

(a) Destruction of the exposed animal; or

(b) Revaccination, if currently vaccinated, including observation by owner for ninety days; or

(c) If not currently vaccinated, vaccination and strict isolation for six months with revaccination one month prior to release from isolation; or

(d) Any other action judged appropriate by the local health officer.

(9) A person importing a dog and/or a cat into Washington state shall comply with WAC 16-54-120.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-191, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-191, filed 3/16/88.]

WAC 246-100-201 Birds—Measures to prevent psittacosis. (1) Definitions specific to this section:

(a) "Breeder" means a person or persons propagating birds for purpose of sale, trade, gift, or display;

(b) "Displayer" means a person, owner, or entity other than a public or private zoological park showing, exhibiting, or allowing a person or persons to handle or access a bird in a place open to the public or in a health care facility;

(c) "Leg band" means a smooth plastic or metal cylinder, either open (seamed) or closed (seamless), designed to be used to encircle a leg of a bird including permanent inscription of identification indicating:

(i) Code for individual bird, and

(ii) Code for breeder source except when open bands identify vendor rather than breeder.

(d) "Psittacine bird" or "bird" means all birds commonly known as:

(i) Parrots,

(ii) Macaws,

- (iii) Cockatoos,
 - (iv) Lovebirds,
 - (v) Parakeets, and
 - (vi) All other birds of the order psittaciformes.
- (e) "Vendor" means a person or entity selling, trading, or giving a bird to another person or entity.

(2) A person selling, trading, or otherwise transferring a bird shall identify each bird by:

- (a) A coded and closed (seamless) leg band;
- (b) A United States department of agriculture open (seamed) leg band; or
- (c) An open (seamed) leg band only in cases where an original and closed (seamless) leg band was lost or required replacement due to injury or potential injury to the bird.

(3) A vendor transferring a bird to other than the general public shall maintain a record of transfer including acquisition, sales, and trade of a bird, for at least one year and including:

- (a) Date of transaction;
- (b) Name and address of the recipient and source;
- (c) Number and type, including the common name of the bird transferred; and
- (d) Leg band codes, including breeder or vendor and individual bird codes, omitting individual bird code only upon initial transfer of a bird propagated by the breeder.

(4) A vendor transferring a bird to the general public shall provide each buyer or recipient with:

- (a) A sales slip or written document including all information required in subsection (3)(a), (b), (c), and (d) of this section; and
- (b) A written warning or caution notice including:
 - (i) Information about possible human infection or disease caused by birds, especially psittacosis, parrot fever, and ornithosis;
 - (ii) Signs of infection or a sick bird including:
 - (A) Nasal discharge,
 - (B) Sneezing,
 - (C) Coughing,
 - (D) Ruffled feathers,
 - (E) Lethargy, and
 - (F) Diarrhea.
 - (iii) Signs and symptoms of an illness in a human including, but not limited to:
 - (A) Chills,
 - (B) Fever,
 - (C) Headache,
 - (D) Cough, and
 - (E) Muscle aches.

(iv) Information that nasal discharge and droppings of an infected or sick bird may cause illness in humans; and

(v) Advice to consult veterinarian or health care provider, as appropriate, if signs or symptoms occur.

(5) A vendor shall post a readable sign in a public area with a warning described in subsection (4)(b) of this section.

(6) When investigation of a human case of psittacosis indicates probable infection from a bird, the local health officer shall:

- (a) Order collection of blood or other appropriate samples from the suspect bird or birds for appropriate laboratory tests to rule out disease; or

(b) Use protocols established in *Communicable Diseases Manual*, seventeenth edition, James Chin, MD, MPH, editor, 2000. A copy of this publication is available for review at the department and at each local health department; and

(c) Have authority to enforce requirements of this section on a nonsittacine bird or birds when:

- (i) There is suspected exposure to an infected bird, or
 - (ii) There is evidence a bird caused a disease.
- (7) When a local health officer orders a quarantine of a bird or birds, the vendor shall:
- (a) Cooperate with the local health officer, and
 - (b) Assume costs associated with action.
- (8) Upon confirmation of psittacosis, vendors shall follow directions issued by the local health officer to:
- (a) Place the birds under antibiotic treatment with environmental cleaning and sanitizing; or
 - (b) Destroy all birds on the premises followed by environmental cleaning and sanitizing; and
 - (c) Assume costs associated with psittacosis prevention and control action ordered by local and state health officer;
 - (d) Prohibit sale or addition of birds to inventory; and
 - (e) Prevent contact of any bird with the public.
- (9) A person exhibiting or displaying a bird or birds in a place or area used or occupied by the public shall exhibit the bird or birds in a manner preventing human exposure to the birds and bird discharges except:

- (a) In single-purpose pet shops and aviaries, and
 - (b) At bird shows if:
 - (i) A room containing a bird or birds is separated from other areas and activities, and
 - (ii) The room entrance has a sign warning a person about potential exposure to psittacosis.
- (10) Shipment and embargo of birds.
- (a) Any person or entity receiving a psittacine bird or birds from points outside Washington state shall:
 - (i) Comply with Title 9 CFR, parts 92.3 and 92.8(b);
 - (ii) Refuse receipt of any bird originating from premises where psittacosis infection is suspected or known; and
 - (iii) Refuse receipt of any bird from a premise quarantined for psittacosis.
 - (b) The state health officer is authorized to:
 - (i) Order placement and removal of an embargo upon shipment of a live bird or birds into Washington state, and
 - (ii) Order any action necessary to control an outbreak or potential outbreak of psittacosis in Washington state.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-100-201, filed 11/22/00, effective 12/23/00; 92-02-019 (Order 225B), § 246-100-201, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-100-201, filed 12/27/90, effective 1/31/91; 88-07-063 (Order 308), § 248-100-201, filed 3/16/88.]

WAC 246-100-206 Special diseases—Sexually transmitted diseases. (1) Any person who violates a rule adopted by the board for the control and treatment of a sexually transmitted disease is subject to penalty under RCW 70.24.080.

(2) Definitions.

(a) "Anonymous HIV testing" means that the name or identity of the individual tested for HIV will not be recorded or linked to the HIV test result. However, once the individual testing positive receives HIV health care or treatment ser-

vices, reporting of the identity of the individual to the state or local public health officer is required.

(b) "Behaviors presenting imminent danger to public health (BPID)" means the following activities, under conditions specified below, performed by an individual with a laboratory confirmed HIV infection:

(i) Anal or vaginal intercourse without a latex condom;
or

(ii) Shared use of blood-contaminated injection equipment;

(iii) Donating or selling HIV-infected blood, blood products, or semen; and

(iv) Under the following specified conditions:

(A) The infected individual received post-test counseling as described in WAC 246-100-209 prior to repeating activities in subsection (2)(b)(i) and (ii) of this section; and

(B) The infected individual did not inform the persons, with whom activities described in subsection (2)(b)(i) and (ii) of this section occurred, of his or her infectious status.

(c) "Behaviors presenting possible risk" means:

(i) Actual actions resulting in "exposure presenting a possible risk" limited to:

(A) Anal, oral, or vaginal intercourse excluding conjugal visits; or

(B) Physical assault; or

(C) Sharing of injection equipment or sharp implements;

or

(D) Throwing or smearing of blood, semen, or vaginal fluids; or

(ii) Threatened action if:

(A) The threatening individual states he or she is infected with HIV; and

(B) The threatened behavior is listed in subsection (2)(b)(i)(A), (B), (C), and (D) of this section; and

(C) The threatened behavior could result in "exposure presenting a possible risk."

(d) "Conduct endangering public health" means:

(i) Anal, oral, or vaginal intercourse for all sexually transmitted diseases;

(ii) For HIV and Hepatitis B:

(A) Anal, oral, or vaginal intercourse; and/or

(B) Sharing of injection equipment; and/or

(C) Donating or selling blood, blood products, body tissues, or semen; and

(iii) Activities described in subsection (2)(d)(i) and (ii) of this section resulting in introduction of blood, semen, and/or vaginal fluids to:

(A) Mucous membranes;

(B) Eyes;

(C) Open cuts, wounds, lesions; or

(D) Interruption of epidermis.

(e) "Confidential HIV testing" means that the name or identity of the individual tested for HIV will be recorded and linked to the HIV test result, and that the name of the individual testing positive for HIV will be reported to the state or local health officer in a private manner.

(f) "Exposure presenting possible risk" means one or more of the following:

(i) Introduction of blood, semen, or vaginal fluids into:

(A) A body orifice or a mucous membrane;

(B) The eye; or

(C) An open cut, wound, lesion, or other interruption of the epidermis.

(ii) A needle puncture or penetrating wound resulting in exposure to blood, semen, and/or vaginal fluids.

(g) "Reasonably believed" or "reason to believe," in reference to a sexually transmitted disease, means a health officer's belief which:

(i) For the purpose of investigating the source and spread of disease, is based upon a credible report from an identifiable individual indicating another person is likely to have a sexually transmitted disease (STD) or to have been exposed to a STD; and

(ii) For the purpose of issuing a written order for an individual to submit to examination, counseling, or treatment is based upon:

(A) Laboratory test results confirming or suggestive of a STD; or

(B) A health care provider's direct observation of clinical signs confirming an individual has or is likely to have a STD; or

(C) Obtaining information directly from an individual infected with a STD about the identity of his or her sexual or needle-sharing contacts when:

(I) Contact with the infected individual occurred during a period when the disease may have been infectious; and

(II) The contact was sufficient to transmit the disease; and

(III) The infected individual is, in the health officer's judgment, credible and believable.

(h) "Substantial exposure" means physical contact resulting in exposure presenting possible risk, limited to:

(i) A physical assault upon the exposed person involving blood or semen;

(ii) Intentional, unauthorized, nonconsensual use of needles or sharp implements to inject or mutilate the exposed person;

(iii) An accidental parenteral or mucous membrane or nonintact skin exposure to blood, semen, or vaginal fluids.

(3) Health care providers shall:

(a) Report each case of sexually transmitted disease as required in chapter 246-100 WAC, and

(b) Instruct each patient regarding:

(i) Communicability of the disease, and

(ii) Requirements to refrain from acts that may transmit the disease to another.

(c) Ensure completion of a prenatal serologic test for syphilis in each pregnant woman pursuant to RCW 70.24.090 including:

(i) Submission of a blood sample for syphilis to a laboratory approved to perform prenatal serologic tests for syphilis, as required in RCW 70.24.090, at the time of the first prenatal visit, and

(ii) Decide whether or not to omit the serologic test for syphilis if the test was performed elsewhere during the current pregnancy.

(4) Laboratories, health care providers, and other persons shall deny issuance of a certificate or statement implying an individual is free from sexually transmitted disease.

(5) Local health officers, health care providers, and others, in addition to requirements in chapter 246-100 WAC, shall comply with the provisions in chapter 70.24 RCW.

(6) Prevention of ophthalmia neonatorum.

(a) Health care providers diagnosing or caring for a patient with gonococcal or chlamydial ophthalmia neonatorum shall report the case to the local health officer or local health department in accordance with the provisions of this chapter.

(b) The principal health care provider attending or assisting in the birth of any infant or caring for an infant after birth, shall ensure instillation of a department-approved prophylactic ophthalmic agent into the conjunctival sacs of the infant within the time frame established by the department in policy statement of ophthalmia agents approved for the prevention of ophthalmia neonatorum in the newborn, issued June 19, 1981.

(7) State and local health officers or their authorized representatives shall:

(a) Have authority to conduct or cause to be conducted an interview and investigation of persons infected or reasonably believed to be infected with a sexually transmitted disease; and

(b) Use procedures and measures described in WAC 246-100-036(4) in conducting investigations.

(8) State and local health officers and their authorized representatives shall have authority to:

(a) Issue written orders for medical examination, testing, and/or counseling under chapter 70.24 RCW, only after:

(i) All other efforts to protect public health have failed, including reasonable efforts to obtain the voluntary cooperation of the person to be affected by the order; and

(ii) Having sufficient evidence to "reasonably believe" the individual to be affected by the order:

(A) Has a sexually transmitted disease; and

(B) Is engaging in "conduct endangering public health"; and

(iii) Investigating and confirming the existence of "conduct endangering public health" by:

(A) Interviewing sources to assess their credibility and accuracy; and

(B) Interviewing the person to be affected by the order; and

(iv) Including in a written order all information required in RCW 70.24.024.

(b) Issue written orders for treatment under RCW 70.24.022 only after laboratory test results, or direct observation of clinical signs or assessment of clinical data by a physician, confirm the individual has, or is likely to have, a sexually transmitted disease;

(c) Issue written orders to cease and desist from specified activities, under RCW 70.24.024 only after:

(i) Determining the person to be affected by the order is engaging in "conduct endangering public health"; and

(ii) Laboratory test results, or direct observation of clinical signs or assessment of clinical data by a physician, confirm the individual has, or is likely to have, a sexually transmitted disease; and

(iii) Exhausting procedures described in subsection (8)(a) of this section; and

(iv) Enlisting, if appropriate, court enforcement of the orders described in subsection (8)(a) and (b) of this section; and

(d) Seek court orders for detainment under RCW 70.24.034, only for persons infected with HIV and only after:

(i) Exhausting procedures described in subsection (8)(a), (b), and (c) of this section; and

(ii) Enlisting, if appropriate, court enforcement of orders to cease and desist; and

(iii) Having sufficient evidence to "reasonably believe" the person is engaging in "behaviors presenting an imminent danger to public health."

(9) Conditions for detainment of individuals infected with sexually transmitted disease.

(a) A local health officer may notify the state health officer if he or she determines:

(i) The criteria for "behaviors presenting imminent danger to public health (BPID)" are met by an individual; and

(ii) Such individual fails to comply with a cease and desist order affirmed or issued by a court.

(b) A local or state health officer may request the prosecuting attorney to file an action in superior court to detain an individual specified in subsection (9)(a) of this section.

(c) The requesting local or state health officer or authorized representative shall:

(i) Notify the department prior to recommending the detainment setting where the individualized counseling and education plan may be carried out consistent with subsection (9)(d), (e), and (f) of this section;

(ii) Make a recommendation to the court for placement of such individual consistent with subsection (9)(d) and (f) of this section; and

(iii) Provide to the court an individualized plan for education and counseling consistent with subsection (9)(e) of this section.

(d) State board of health requirements for detainment of individuals demonstrating BPID:

(i) Sufficient number of staff, caregivers, and/or family members to:

(A) Provide round-the-clock supervision, safety of detainee, and security; and

(B) Limit and restrict activities to prevent BPID; and

(C) Make available any medical, psychological, or nursing care when needed; and

(D) Provide access to AIDS education and counseling; and

(E) Immediately notify the local or state health officer of unauthorized absence or elopement; and

(ii) Sufficient equipment and facilities to provide:

(A) Meals and nourishment to meet nutritional needs; and

(B) A sanitary toilet and lavatory; and

(C) A bathing facility; and

(D) Bed and clean bedding appropriate to size of detainee; and

(E) A safe detention setting appropriate to chronological and developmental age of detainee; and

(F) A private sleeping room; and

(G) Prevention of sexual exploitation.

(iii) Sufficient access to services and programs directed toward cessation of BPID and providing:

(A) Linguistically, socially, culturally, and developmentally appropriate ongoing AIDS education and counseling; and

(B) Psychological and psychiatric evaluation and counseling; and

(C) Implementation of court-ordered plan for individualized counseling and education consistent with subsection (9)(e) of this section.

(iv) If required, provide access to isolation and/or restraint in accordance with restraint and seclusion rules in WAC 275-55-263 (2)(c);

(v) Maintain a safe, secure environment free from harassment, physical danger, and sexual exploitation.

(e) Washington state board of health standards for an individualized counseling and education plan for a detainee include:

(i) Consideration of detainee's personal and environmental characteristics, culture, social group, developmental age, and language;

(ii) Identification of habitual and addictive behavior and relapse pattern;

(iii) Identification of unique risk factors and possible cross-addiction leading to behavior presenting imminent danger to public health;

(iv) Identification of obstacles to behavior change and determination of specific objectives for desired behavior;

(v) Provision of information about acquisition and transmission of HIV infection;

(vi) Teaching and training of individual coping skills to prevent relapse to BPID;

(vii) Specific counseling for chemical dependency, if required;

(viii) Identification of and assistance with access to community resources, including social services and self-help groups appropriate to provide ongoing support and maintenance of behavior change; and

(ix) Designation of a person primarily responsible for counseling and/or education who:

(A) Completed pretest and post-test counselor training approved by the office on AIDS; and

(B) Received training, as approved by the office on AIDS, focused on facilitating behavior change related to preventing BPID; and

(C) Has a post-graduate degree in social work, psychology, counseling, psychosocial nursing, or other allied profession; and

(D) Completed at least one year clinical experience after post-graduate education with a primary focus on individualized behavior change; and

(E) Is a certified counselor under chapter 18.19 RCW.

(x) Designation and provision of a qualified counselor under WAC 275-19-145 when the detainee is assessed to have a drug or alcohol problem.

(f) The state board of health designates the following settings appropriate for detainment provided a setting meets requirements in subsection (9)(d)(i), (ii), (iii), (iv), and (v) of this section:

(i) Homes, care facilities, or treatment institutions operated or contracted by the department;

(ii) Private homes, as recommended by the local or state health officer;

(iii) Boarding homes licensed under chapter 18.20 RCW;

(iv) Nursing homes licensed under chapter 18.51 RCW;

(v) Facilities licensed under chapter 71.12 RCW, including:

(A) Psychiatric hospitals, per chapter 246-322 WAC;

(B) Alcoholism treatment centers if certified for substance use under chapter 275-19 WAC;

(C) Adult residential rehabilitation centers, per chapter 246-325 WAC;

(D) Private adult treatment homes, per chapter 246-325 WAC;

(E) Residential treatment facilities for psychiatrically impaired children and youth, per chapter 246-323 WAC;

(vi) A hospital licensed under chapter 70.41 RCW.

(10) Jail administrators may order pretest counseling, post-test counseling, and HIV testing of persons detained in jail according to RCW 70.24.360 only under the following conditions:

(a) The jail administrator documents and reports to the local health officer, within seven days after the incident, any incident perceived to be actual or threatened "behaviors presenting possible risk"; and

(b) The local health officer:

(i) Determines the documented behavior or behaviors meet the criteria established in the definition of "behaviors presenting a possible risk"; and

(ii) Interviews the detained individual to evaluate the factual basis for alleged actual or threatened behavior; and

(iii) Makes a fact determination, based upon the documented behavior, the interview with the detained individual, and/or independent investigation, that sufficient factual evidence exists to support the allegation of actual or threatened "behaviors presenting possible risk"; and

(iv) Arranges for testing of the individual who is the source of the behavior to occur within seven days of the request from the jail administrator; and

(v) Reviews with the detained individual who is the source of the behavior the documentation of the actual or threatened behavior to try to assure understanding of the basis for HIV testing; and

(vi) Provides written approval of the jail administrator's order prior to HIV testing in accordance with subsection (7)(a)(i) of this section.

(c) The jail administrator maintains HIV test results and identity of the tested individual as a confidential, nondisclosable record, as provided in RCW 70.24.105.

(11) When an individual experiences a substantial exposure to another individual's body fluids and requests HIV testing of that other individual, the state and local health officers have authority to order pretest counseling, HIV testing, and post-test counseling of that other individual providing:

(a) The alleged exposure occurred when the individual was employed or acting as an authorized volunteer in one of the following employment categories:

(i) Law enforcement officer;

- (ii) Firefighter;
- (iii) Health care provider;
- (iv) Staff of health care facilities;
- (v) Funeral director;
- (vi) Embalmer; and
- (b) The alleged substantial exposure occurred on the job; and
- (c) The request to the health officer for testing and counseling of the individual was made within seven days of the occurrence of the alleged exposure; and
- (d) The local health officer:
 - (i) Determines that the alleged exposure meets the criteria established in the definition of "substantial exposure"; and
 - (ii) Ensures that pretest counseling of the individual to be tested, or a legal representative, occurs; and
 - (iii) Arranges for testing of the individual who is the source of the exposure to occur within seven days of the request from the person exposed; and
- (e) The exposed individual agrees to be tested for HIV if such testing is determined appropriate by the health officer; and
- (f) Records on HIV testing ordered by a health officer are maintained only by the ordering health officer.

(12) For the purpose of RCW 49.60.172 concerning the absence of HIV infection as a bona fide occupational qualification only, "significant risk" means a job qualification which requires person-to-person contact likely to result in direct introduction of blood into the eye, an open cut or wound, or other interruption of the epidermis, when:

- (a) No adequate barrier protection is practical; and
- (b) Determined only on case-by-case basis consistent with RCW 49.60.180.

[Statutory Authority: RCW 70.24.380, 02-12-106, § 246-100-206, filed 6/5/02, effective 7/6/02. Statutory Authority: RCW 70.24.125 and 70.24.130, 99-17-077, § 246-100-206, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 70.24.022, [70.24].340 and Public Law 104-146, 97-15-099, § 246-100-206, filed 7/21/97, effective 7/21/97. Statutory Authority: RCW 43.20.050 and 70.24.130, 92-02-019 (Order 225B), § 246-100-206, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-100-206, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW, 89-07-095 (Order 325), § 248-100-206, filed 3/22/89; 88-21-093 (Order 322), § 248-100-206, filed 10/19/88; 88-17-056 (Order 316), § 248-100-206, filed 8/17/88. Statutory Authority: RCW 43.20.050, 87-11-047 (Order 302), § 248-100-206, filed 5/19/87.]

WAC 246-100-207 Human immunodeficiency virus (HIV) testing—Ordering—Laboratory screening—Interpretation—Reporting. (1) Any person ordering or prescribing an HIV test for another, except for seroprevalent studies under chapter 70.24 RCW or provided under subsections (2) and (3) of this section or provided under WAC 246-100-208(1), shall:

- (a) Provide or refer for pretest counseling described under WAC 246-100-209;
- (b) Obtain or ensure informed specific consent of the individual to be tested separate from other consents prior to ordering or prescribing an HIV test, unless excepted under provisions in chapter 70.24 RCW;
- (c) Inform, orally or in writing, the individual to be tested of the availability of anonymous HIV testing and of the

differences between "anonymous HIV testing" and "confidential HIV testing"; and

(d) Provide or refer for post-test counseling described under WAC 246-100-209 if HIV test is positive for or suggestive of HIV infection.

(2) Any person authorized to order or prescribe an HIV test for another may offer anonymous HIV testing without restriction.

(3) Blood banks, tissue banks, and others collecting or processing blood, sperm, tissues, or organs for transfusion/transplanting shall:

(a) Obtain or ensure informed specific consent of the individual prior to ordering or prescribing an HIV test, unless excepted under provisions in chapter 70.24 RCW;

(b) Explain that the reason for HIV testing is to prevent contamination of the blood supply, tissue, or organ bank donations;

(c) At the time of notification regarding a positive HIV test, provide or ensure at least one individual counseling session; and

(d) Inform the individual that the name of the individual testing positive for HIV infection will be confidentially reported to the state or local health officer.

(4) Persons subject to regulation under Title 48 RCW and requesting an insured, subscriber, or potential insured or subscriber to furnish the results of an HIV test for underwriting purposes, as a condition for obtaining or renewing coverage under an insurance contract, health care service contract, or health maintenance organization agreement shall:

(a) Before obtaining a specimen to perform an HIV test, provide written information to the individual tested explaining:

- (i) What an HIV test is;
- (ii) Behaviors placing a person at risk for HIV infection;
- (iii) The purpose of HIV testing in this setting is to determine eligibility for coverage;
- (iv) The potential risks of HIV testing; and
- (v) Where to obtain HIV pretest counseling.

(b) Obtain informed specific written consent for an HIV test. The written informed consent shall include:

(i) An explanation of confidential treatment of test result reports limited to persons involved in handling or determining applications for coverage or claims for the applicant or claimant; and

(ii) That the name of the individual testing positive for HIV infection will be confidentially reported to the state or local health officer; and

(iii) Requirements under subsection (4)(c) of this section.

(c) Establish procedures to inform an applicant of the following:

(i) Post-test counseling specified under WAC 246-100-209(4) is required if an HIV test is positive or indeterminate;

(ii) Post-test counseling is done at the time any positive or indeterminate HIV test result is given to the tested individual;

(iii) The applicant is required to designate a health care provider or health care agency to whom positive or indeterminate HIV test results are to be provided for interpretation and post-test counseling; and

(iv) When an individual applicant does not identify a designated health care provider or health care agency and the applicant's HIV test results are positive or indeterminate, the insurer, health care service contractor, or health maintenance organization shall provide the test results to the state or local health department for interpretation and post-test counseling.

(5) Laboratories and other places where HIV testing is performed shall demonstrate complete and satisfactory participation in an HIV proficiency testing program approved by the Department Laboratory Quality Assurance Section, Mail-stop K17-9, 1610 N.E. 150th, Seattle, Washington 98155.

(6) The department laboratory quality assurance section shall accept substitutions for EIA screening only as approved by the United States Food and Drug Administration (FDA) and a published list or other written FDA communication.

(7) Persons informing a tested individual of positive laboratory test results indicating HIV infection shall do so only when:

- (a) HIV is isolated by viral culture technique; or
- (b) HIV nucleic acid (RNA or DNA) is detected; or
- (c) HIV is detected through a P24 antigen (neutralizable) test; or
- (d) HIV antibodies are identified by a sequence of tests which are reactive and include:
 - (i) A repeatedly reactive screening test such as the enzyme immunoassay (EIA); and
 - (ii) An additional, more specific, assay such as a positive western blot assay (WBA) or other tests as approved by the United States Food and Drug Administration (FDA) in a published list or other written FDA communication.

(e) Such information consists of relevant, pertinent facts communicated in such a way that it will be readily understood by the recipient.

[Statutory Authority: RCW 70.24.380. 02-12-106, § 246-100-207, filed 6/5/02, effective 7/6/02. Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-207, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 70.24.380. 97-04-041, § 246-100-207, filed 1/31/97, effective 3/3/97. Statutory Authority: RCW 43.20.050 and 70.24.130. 92-02-019 (Order 225B), § 246-100-207, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-207, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW and RCW 70.24.130. 89-20-006 (Order 334), § 248-100-207, filed 9/22/89, effective 10/23/89. Statutory Authority: Chapter 70.24 RCW. 89-14-003 (Order 329), § 248-100-207, filed 6/22/89; 88-17-058 (Order 318), § 248-100-207, filed 8/17/88.]

WAC 246-100-208 Counseling standard—AIDS counseling. (1) Principal health care providers shall counsel or ensure AIDS counseling for each pregnant woman. "AIDS counseling" for a pregnant woman means:

(a) Performing a risk screening that includes an assessment of sexual and drug use history as part of the intake process;

(b) Providing written or verbal information on HIV infection that at a minimum includes:

- (i) All pregnant women are recommended to have an HIV test;
- (ii) HIV is the cause of AIDS and how HIV is transmitted;
- (iii) A woman may be at risk for HIV infection, and not know it;

(2003 Ed.)

(iv) The efficacy of treatments to reduce vertical transmission;

(v) The availability of anonymous testing, and why confidential testing is recommended for pregnant women;

(vi) The need to report HIV infection;

(vii) Public funds are available to assist eligible HIV-infected women receive medical care and other assistance; and

(viii) Women who decline testing will not be denied care for themselves or their infants;

(c) Obtaining the informed consent of the pregnant woman, separately or as part of the consent for a battery of other routine tests provided that the woman is specifically informed in writing or verbally that a test for HIV is included;

(d) Providing HIV testing unless the pregnant woman refuses to give consent;

(e) If the pregnant woman refuses a confidential test, discussing and addressing reasons for refusal and document in the medical record that refusal and the provision of education on the benefits of HIV testing;

(f) If the risk screening indicates, providing or referring for behavioral change counseling for women who:

(i) Have or recently have had a sexual partner(s) who is known to be HIV infected or is a man who has sex with another man or is an injection drug user;

(ii) Uses or recently used injection drugs;

(iii) Has signs or symptoms of HIV seroconversion;

(iv) Currently or has recently exchanged sex for drugs or money or had a sexually transmitted disease or had multiple sex partners; or

(v) Expresses a need for further, more intensive counseling; and

(g) Basing the behavioral change counseling on the standards defined in WAC 246-100-209 and the recommendations of the Federal Centers for Disease Control and Prevention published in *Revised Guidelines for HIV Counseling, Testing and Referral*, and *Revised Recommendations for HIV Screening of Pregnant Women, November 9, 2001*; and

(h) Offering referrals and providing follow-up to other necessary medical, social and HIV prevention services.

(2) Health care providers may obtain a sample brochure addressing the elements of subsection (1)(b) of this section by contacting the department of health's HIV prevention program at P.O. Box 47840, Olympia, WA 98504-7840.

(3) Principal health care providers shall counsel or ensure AIDS counseling as defined in WAC 246-100-011(2) for each patient seeking treatment of a sexually transmitted disease.

(4) Drug treatment programs under chapter 70.96A RCW shall provide or ensure provision of AIDS counseling as defined in WAC 246-100-011(2) for each person in a drug treatment program.

(5) Health care providers, persons, and organizations providing AIDS counseling in subsections (3) and (4) of this section shall:

(a) Assess the behaviors of each individual counseled for risk of acquiring and transmitting human immunodeficiency virus (HIV);

(b) Maintain a nonjudgmental environment during counseling which:

(i) Considers the individual's particular circumstances; and

(ii) Is culturally, socially, linguistically, and developmentally appropriate to the individual being counseled.

(c) Focus counseling on behaviors increasing the risk of HIV acquisition and transmission;

(d) Provide or ensure provision of personalized risk reduction education to individuals who:

(i) Are men who had sex with other men at any time since 1977;

(ii) Used intravenous substances at any time since 1977;

(iii) Engaged in sex for money or drugs at any time since 1977;

(iv) Have had sexual and/or injection equipment-sharing contact with persons listed in (d)(i), (ii), and (iii) of this subsection;

(v) Have been exposed to or known to have had a sexually transmitted disease at any time since 1977;

(vi) Are at increased risk of HIV infection by definition of United States Public Health Service, Centers for Disease Control and Prevention;

(vii) Are enrolled in a drug treatment program under chapter 69.54 RCW; or

(viii) Received multiple transfusions of blood, plasma, or blood products from 1977 to 1985.

(e) Encourage individuals assessed to be at other than virtually no risk of HIV infection to:

(i) Receive AIDS risk reduction counseling;

(ii) Consider information about the nature, purpose, and potential ramifications of HIV testing;

(iii) Receive pretest counseling;

(iv) Consider confidential or anonymous voluntary HIV testing if appropriate and understand the differences between "anonymous HIV testing" and "confidential HIV testing"; and

(v) "Virtually no risk of HIV infection" means persons with medical histories absent of and reporting none of the following factors:

(A) Transfusion with blood or blood products at any time since 1977;

(B) Residence at any time in countries where HIV is considered endemic since 1977;

(C) Unprotected sex between men at any time since 1977;

(D) Use of intravenous substances at any time since 1977, especially when sharing injection equipment;

(E) Engagement in sex for money or drugs at any time since 1977;

(F) Sexual and/or injection equipment-sharing contacts at any time since 1977 with persons listed in (e)(v)(C), (D), and (E) of this subsection;

(G) Exposure to a sexually transmitted disease; and

(H) Increased risk of HIV infection by definition of United States Public Health Service, Centers for Disease Control and Prevention.

(6) Persons and organizations providing AIDS counseling may provide additional or more comprehensive counseling than required in this section.

[Statutory Authority: RCW 70.24.380. 02-12-106, § 246-100-208, filed 6/5/02, effective 7/6/02. Statutory Authority: RCW 70.24.125 and

70.24.130. 99-17-077, § 246-100-208, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW 43.20.050 and 70.24.130. 92-02-019 (Order 225B), § 246-100-208, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-100-208, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW. 88-17-058 (Order 318), § 248-100-208, filed 8/17/88.]

WAC 246-100-209 Counseling standards—Human immunodeficiency virus (HIV) pretest counseling—HIV post-test counseling. (1) Health care providers and other persons providing pretest counseling shall:

(a) Assess the individual's risk of acquiring and transmitting HIV by evaluating information about the individual's possible risk-behaviors;

(b) Provide at least one individual counseling session prior to HIV testing;

(c) Inform in writing or orally any individual planning to be tested for HIV that:

(i) Anonymous HIV testing is available through the local health department, home testing kits, or may be available through other community sources, and explain the differences between "anonymous HIV testing" and "confidential HIV testing"; and

(ii) If the test result is positive, sex and injection equipment-sharing partners, including spouses must be notified that they:

(A) May have been exposed to and infected with HIV; and

(B) Should seek HIV pretest counseling and consider HIV testing; and

(iii) The principal health care provider is required to refer identities of at-risk partners to the local health officer or authorized representative if:

(A) The HIV-infected individual either refuses or is unable to notify partners of exposure, possible infection, and need for pretest counseling and HIV testing; or

(B) The HIV-infected individual neither accepts assistance nor agrees to referral to the local health officer or an authorized representative for assistance in notifying partners; and

(iv) Unless HIV testing is anonymous, the principal health care provider is required to confidentially refer the identity of the individual testing positive to the local health officer or an authorized representative.

(2) When an individual is assessed by a counselor or health care provider as "virtually no risk of HIV infection," as defined in WAC 246-100-208 (3)(e)(v) a counselor or the health care provider shall, in addition to subsection (1)(a) of this section:

(a) Maintain a nonjudgmental environment during counseling which:

(i) Considers the individual's particular circumstances; and

(ii) Is culturally, socially, linguistically, and developmentally appropriate to the individual being counseled.

(b) Explain the nature, purpose, value, and reason for the HIV tests;

(c) In writing or orally, inform the individual to be tested that anonymous HIV testing is available through the local health department, home testing kits, or may be available through other community sources, and explain the differ-

ences between "anonymous HIV testing" and "confidential HIV testing";

(d) Explain the possible effect of HIV testing and a positive HIV test result related to employment, insurance, housing, and other potential legal, social, and personal consequences;

(e) Develop and maintain a system of referral and make referrals that:

(i) Are accessible and confidential for those counseled;

(ii) Are acceptable to and supportive of those counseled;

(iii) Provide assistance to those counseled in maintaining risk reduction behaviors.

(f) Provide at least one individual counseling session at the time HIV test results are disclosed to individuals testing positive; and

(g) Maintain disclosure and confidentiality requirements in WAC 246-100-016.

(3) If the individual is assessed by a health care provider to be other than "virtually no risk of HIV infection," as defined in WAC 246-100-208 (3)(e)(v), the person providing pretest counseling shall maintain requirements in subsection (1) and (2) of this section and:

(a) Focus counseling on behaviors increasing the risk of HIV acquisition and transmission;

(b) Provide personalized risk reduction education to individuals who:

(i) Are men engaging in unprotected intercourse with other men at any time since 1977;

(ii) Used intravenous substances at any time since 1977, especially those sharing injection equipment;

(iii) Engaged in sex for money or drugs at any time since 1977;

(iv) Have had sexual and/or injection equipment-sharing contacts at any time since 1977 with persons listed in subsection (3)(b)(i), (ii), and (iii) of this section;

(v) Have been exposed to or diagnosed with a sexually transmitted disease;

(vi) Are at increased risk of HIV infection by definition of United States Public Health Services, Centers for Disease Control;

(vii) Are required by RCW 70.24.095 and 70.24.340 to receive HIV counseling and testing.

(c) Inform any individual planning to be tested for HIV of the need to notify sexual and injection equipment-sharing partners, including spouses, if test results are positive;

(d) Advise individuals listed in subsection (3)(b)(i), (ii), and (iii) of this section not to donate or sell blood, blood products, semen, organs, or other body tissues; and

(e) Emphasize or reemphasize the following counseling messages:

(i) The following will eliminate or decrease the risk of HIV infection:

(A) Sexual abstinence;

(B) A mutually monogamous relationship between uninfected people; and

(C) Following safer sex guidelines.

(ii) Do not share intravenous drugs and injection equipment;

(iii) Do not engage in behaviors in which blood, vaginal fluid, or semen is exchanged;

(2003 Ed.)

(iv) Condoms, even if used properly, do not supply absolute protection from HIV infection;

(v) Condoms may reduce risk of HIV infection if the condom is:

(A) Latex and used with a water-based lubricant rather than an oil-based lubricant, if a lubricant is used;

(B) Used in conjunction with spermicide during vaginal or anal intercourse; and

(C) Worn from start to finish of vaginal, oral, and anal intercourse.

(vi) Dental dams may reduce risk of HIV infection if the dental dam is:

(A) Latex; and

(B) Used from start to finish of oral intercourse.

(vii) The sexual behaviors having highest risk for HIV infection are those involving the exchange of blood or semen, especially receptive anal and vaginal intercourse;

(viii) Anal intercourse may increase the risk of condom failure and HIV infection;

(ix) Infected women should postpone pregnancy until more is known about how to prevent prenatal and perinatal transmission of HIV infection;

(x) Sexual negotiation skills can be learned to enhance risk reduction; and

(xi) Other sexually transmitted diseases, especially those causing genital ulcers, may increase the risk of acquiring or transmitting HIV infection.

(f) Make those counseled aware HIV retesting at a later date may be necessary or recommended.

(4) Persons providing post-test counseling shall:

(a) Follow requirements in subsection (1) of this section;

(b) Provide at least one individual counseling session at the time HIV test results are disclosed for individuals:

(i) Testing positive for HIV; or

(ii) Reporting practice of behaviors listed in (3)(b)(i), (ii), and (iii) of this section.

(c) If the individual being counseled tested positive for HIV infection:

(i) Unless testing was anonymous, remind the individual that the identity of the individual testing positive for HIV infection will be confidentially reported to the state or local health officer;

(ii) Provide assistance to persons in notifying partners, including spouses, and confirm those partners including spouses have been notified; and/or

(iii) Seek agreement to refer the name of the individual to the local health officer for assistance in notifying partners; and/or

(iv) Offer to refer partners for counseling and testing; and

(v) Develop or adopt a system to avoid documenting the names of referred partners in the permanent record of the individual being counseled; and

(vi) Offer referral for alcohol and drug and mental health counseling, including suicide prevention, if appropriate; and

(vii) Provide or refer for medical evaluation and antiretroviral treatment; and

(viii) Refer for tuberculosis screening.

[Statutory Authority: RCW 70.24.125 and 70.24.130. 99-17-077, § 246-100-209, filed 8/13/99, effective 9/1/99. Statutory Authority: RCW

70.24.022, [70.24].340 and Public Law 104-146, 97-15-099, § 246-100-209, filed 7/21/97, effective 7/21/97. Statutory Authority: RCW 43.20.050 and 70.24.130, 92-02-019 (Order 225B), § 246-100-209, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-100-209, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.24 RCW, 89-02-008 (Order 324), § 248-100-209, filed 12/27/88; 88-17-058 (Order 318), § 248-100-209, filed 8/17/88.]

WAC 246-100-211 Special diseases—Tuberculosis.

(1) Health care providers diagnosing or caring for a person with tuberculosis, whether pulmonary or nonpulmonary, shall:

(a) Report the case to the local health officer or local health department in accordance with the provisions of this chapter, and

(b) Report patient status to the local health officer every three months or as requested.

(2) The local health officer or local health department shall:

(a) Have primary responsibility for control of tuberculosis within the designated jurisdiction;

(b) Maintain a tuberculosis control program including:

(i) Prophylaxis,

(ii) Treatment,

(iii) Surveillance,

(iv) Case finding,

(v) Contact tracing, and

(vi) Other aspects of epidemiologic investigation;

(c) Maintain a tuberculosis register of all persons with tuberculosis, whether new or recurrent, within the local jurisdiction including information about:

(i) Identification of patient,

(ii) Clinical condition,

(iii) Epidemiology of disease,

(iv) Frequency of examinations;

(d) Impose isolation of a person with tuberculosis in an infectious stage if that person does not observe precautions to prevent the spread of the infection;

(e) Designate the place of isolation when imposed;

(f) Release the person from isolation when appropriate;

(g) Maintain and provide outpatient tuberculosis diagnostic and treatment services as necessary, including public health nursing services and physician consultation; and

(h) Submit reports of all cases to the department in accordance with the provisions of this chapter.

(3) When a person with tuberculosis requires hospitalization,

(a) Hospital admission shall occur in accordance with procedures arranged by the local health officer and the medical director or administrator of the hospital, and

(b) The principal health care provider shall:

(i) Maintain responsibility for deciding date of discharge, and

(ii) Notify the local health officer of intended discharge in order to assure appropriate outpatient arrangements.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-100-211, filed 12/27/90, effective 1/31/91; 87-11-047 (Order 302), § 248-100-211, filed 5/19/87.]

[Title 246 WAC—p. 130]

Chapter 246-101 WAC NOTIFIABLE CONDITIONS

WAC

246-101-001	Provisions of general applicability.
246-101-005	Purpose of notifiable conditions reporting.
246-101-010	Definitions within the notifiable conditions regulations.
246-101-015	Provisional condition notification.
246-101-101	Notifiable conditions and the health care provider.
246-101-105	Duties of the health care provider.
246-101-110	Means of notification.
246-101-115	Content of notifications.
246-101-120	Handling of case reports and medical information.
246-101-201	Notifiable conditions and laboratories.
246-101-205	Responsibilities and duties of the laboratory director.
246-101-210	Means of specimen submission.
246-101-215	Content of documentation accompanying specimen submission.
246-101-220	Means of notification for positive cultures or preliminary test results.
246-101-225	Content of notifications for positive cultures or preliminary test results.
246-101-230	Handling of case reports and medical information.
246-101-301	Notifiable conditions and health care facilities.
246-101-305	Duties of the health care facility.
246-101-310	Means of notification.
246-101-315	Content of notifications.
246-101-320	Handling of case reports and medical information.
246-101-401	Notifiable conditions and the responsibilities and duties of others.
246-101-405	Responsibilities of veterinarians.
246-101-410	Responsibilities of food service establishments.
246-101-415	Responsibilities of child day care facilities.
246-101-420	Responsibilities of schools.
246-101-425	Responsibilities of the general public.
246-101-501	Notifiable conditions and local health departments.
246-101-505	Duties of the local health officer or the local health department.
246-101-510	Means of notification.
246-101-515	Handling of case reports and medical information.
246-101-520	Special conditions—AIDS and HIV.
246-101-525	Special condition—Influenza.
246-101-601	Notifiable conditions and the department of health.
246-101-605	Duties of the department.
246-101-610	Handling of case reports and medical information.
246-101-615	Requirements for data dissemination.
246-101-620	Requirements for notification to the department of labor and industries.
246-101-625	Content of notifications to the department of labor and industries.
246-101-630	Special condition—Antibiotic resistant disease.
246-101-635	Special conditions—AIDS and HIV.
246-101-640	Special condition—Birth defects.
246-101-701	Notifiable conditions and the department of labor and industries.
246-101-705	Duties of the department of labor and industries.
246-101-710	Handling of case reports and medical information.
246-101-715	Requirements for data dissemination.
246-101-720	Requirements for notification to local health departments.
246-101-725	Requirements for notification to the department of health.
246-101-730	Special condition—Hospitalized burns.

WAC 246-101-001 Provisions of general applicability. WAC 246-101-005, 246-101-010, and 246-101-015 are applicable throughout this chapter.

[Statutory Authority: RCW 43.20.050 and 70.104.030, 00-23-120, § 246-101-001, filed 11/22/00, effective 12/23/00.]

WAC 246-101-005 Purpose of notifiable conditions reporting. The purpose of notifiable conditions reporting is to provide the information necessary for public health officials to protect the public's health by tracking communicable diseases and other conditions. These data are critical to local health departments and the departments of health and labor and industries in their efforts to prevent and control the

(2003 Ed.)

spread of diseases and other conditions. Public health officials take steps to protect the public, based on these notifications. Treating persons already ill, providing preventive therapies for individuals who came into contact with infectious agents, investigating and halting outbreaks, and removing harmful health exposures are key ways public health officials protect the public. Public health workers also use these data to assess broader patterns, including historical trends and geographic clustering. By analyzing the broader picture, officials are able to take appropriate actions, including outbreak investigation, redirection of program activities, or policy development.

[Statutory Authority: RCW 43.20.050, 00-23-120, § 246-101-005, filed 11/22/00, effective 12/23/00.]

WAC 246-101-010 Definitions within the notifiable conditions regulations. The following definitions apply in the interpretation and enforcement of this chapter:

(1) "Blood lead level" means a measurement of lead content in whole blood.

(2) "Board" means the Washington state board of health.

(3) "Carrier" means a person harboring a specific infectious agent and serving as a potential source of infection to others.

(4) "Case" means a person, alive or dead, diagnosed with a particular disease or condition by a health care provider with diagnosis based on clinical or laboratory criteria or both.

(5) "Child day care facility" means an agency regularly providing care for a group of children for less than twenty-four hours a day and subject to licensing under chapter 74.15 RCW.

(6) "Condition notifiable within three work days" means a notifiable condition that must be reported to the local health officer or department within three working days following date of diagnosis. For example, if a condition notifiable within three work days is diagnosed on a Friday afternoon, the report must be submitted by the following Wednesday.

(7) "Communicable disease" means a disease caused by an infectious agent which can be transmitted from one person, animal, or object to another person by direct or indirect means including transmission via an intermediate host or vector, food, water, or air.

(8) "Communicable disease cluster" means two or more cases of a confirmed or suspected communicable disease with a suspected common source diagnosed or exposed within a twenty-four hour period.

(9) "Contact" means a person exposed to an infected person, animal, or contaminated environment that may lead to infection.

(10) "Department" means the Washington state department of health.

(11) "Disease of suspected bioterrorism origin" means a disease caused by viruses, bacteria, fungi, or toxins from living organisms that are used to produce death or disease in humans, animals, or plants. Many of these diseases may have nonspecific presenting symptoms. The following situations could represent a possible bioterrorism event and should be reported immediately to the local health department:

(a) A single diagnosed or strongly suspected case of disease caused by an uncommon agent or a potential agent of

bioterrorism occurring in a patient with no known risk factors;

(b) A cluster of patients presenting with a similar syndrome that includes unusual disease characteristics or unusually high morbidity or mortality without obvious etiology; or

(c) Unexplained increase in a common syndrome above seasonally expected levels.

(12) "Elevated blood lead level" means blood lead levels equal to or greater than 25 micrograms per deciliter for persons aged fifteen years or older, or equal to or greater than 10 micrograms per deciliter in children less than fifteen years of age.

(13) "Food service establishment" means a place, location, operation, site, or facility where food is manufactured, prepared, processed, packaged, dispensed, distributed, sold, served, or offered to the consumer regardless of whether or not compensation for food occurs.

(14) "Health care facility" means:

(a) Any facility or institution licensed under chapter 18.20 RCW, Boarding homes; chapter 18.46 RCW, Birthing centers; chapter 18.51 RCW, Nursing homes; chapter 70.41 RCW, Hospitals; chapter 70.128 RCW, Adult family homes; or chapter 71.12 RCW, Private establishments;

(b) Clinics, or other settings where one or more health care providers practice; and

(c) In reference to a sexually transmitted disease, other settings as defined in chapter 70.24 RCW.

(15) "Health care provider" means any person having direct or supervisory responsibility for the delivery of health care who is:

(a) Licensed or certified in this state under Title 18 RCW; or

(b) Military personnel providing health care within the state regardless of licensure.

(16) "Health care services to the patient" means treatment, consultation, or intervention for patient care.

(17) "Health carrier" means a disability insurer regulated under chapter 48.20 or 48.21 RCW, a health care service contractor as defined in RCW 48.44.010, or a health maintenance organization as defined in RCW 48.46.020.

(18) "HIV testing" means conducting a laboratory test or sequence of tests to detect the human immunodeficiency virus (HIV) or antibodies to HIV performed in accordance with requirements to WAC 246-100-207. To assure that the protection, including, but not limited to, pre- and post-test counseling, consent, and confidentiality afforded to HIV testing as described in chapter 246-100 WAC also applies to the enumeration of CD4 + (T4) lymphocyte counts (CD4 + counts) and CD4 + (T4) percents of total lymphocytes (CD4 + percents) when used to diagnose HIV infection, CD4 + counts and CD4 + percents will be presumed HIV testing except when shown by clear and convincing evidence to be for use in the following circumstances:

(a) Monitoring previously diagnosed infection with HIV;

(b) Monitoring organ or bone marrow transplants;

(c) Monitoring chemotherapy;

(d) Medical research; or

(e) Diagnosis or monitoring of congenital immunodeficiency states or autoimmune states not related to HIV.

The burden of proving the existence of one or more of the circumstances identified in (a) through (e) of this subsection shall be on the person asserting the existence.

(19) "Immediately notifiable condition" means a notifiable condition of urgent public health importance, a case or suspected case of which must be reported to the local health officer or the department immediately at the time of diagnosis or suspected diagnosis.

(20) "Infection control measures" means the management of infected persons, or of a person suspected to be infected, and others in a manner to prevent transmission of the infectious agent.

(21) "Institutional review board" means any board, committee, or other group formally designated by an institution, or authorized under federal or state law, to review, approve the initiation of, or conduct periodic review of research programs to assure the protection of the rights and welfare of human research subjects as defined in RCW 70.02.010.

(22) "Isolation" means the separation or restriction of activities of infected individuals, or of persons suspected to be infected, from other persons to prevent transmission of the infectious agent.

(23) "Laboratory" means any facility licensed as a medical test site under chapter 70.42 RCW.

(24) "Laboratory director" means the director or manager, by whatever title known, having the administrative responsibility in any licensed medical test site.

(25) "Local health department" means the city, town, county, or district agency providing public health services to persons within the area, established under chapters 70.05, 70.08, and 70.46 RCW.

(26) "Local health officer" means the individual having been appointed under chapter 70.05 RCW as the health officer for the local health department, or having been appointed under chapter 70.08 RCW as the director of public health of a combined city-county health department.

(27) "Member of the general public" means any person present within the boundary of the state of Washington.

(28) "Monthly notifiable condition" means a notifiable condition which must be reported to the local health officer or department within one month of diagnosis.

(29) "Nosocomial infection" means an infection acquired in a hospital or other health care facility.

(30) "Notifiable condition" means a disease or condition of public health importance, a case of which, and for certain diseases, a suspected case of which, must be brought to the attention of the local health officer or the state health officer.

(31) "Other rare diseases of public health significance" means a disease or condition, of general public health concern, which is occasionally or not ordinarily seen in the state of Washington including, but not limited to, viral hemorrhagic fevers, Rocky Mountain Spotted fever, and other tick borne diseases. This also includes a communicable disease that would be of general public concern if detected in Washington.

(32) "Outbreak" means the occurrence of cases of a disease or condition in any area over a given period of time in excess of the expected number of cases.

(33) "Patient" means a case, suspected case, or contact.

(34) "Pesticide poisoning" means the disturbance of function, damage to structure, or illness in humans resulting from the inhalation, absorption, ingestion of, or contact with any pesticide.

(35) "Principal health care provider" means the attending health care provider recognized as primarily responsible for diagnosis or treatment of a patient, or in the absence of such, the health care provider initiating diagnostic testing or treatment for the patient.

(36) "Public health authorities" means local health departments, the state health department, and the department of labor and industries personnel charged with administering provisions of this chapter.

(37) "Quarantine" means the separation or restriction on activities of an individual having been exposed to or infected with an infectious agent, to prevent disease transmission.

(38) "School" means a facility for programs of education as defined in RCW 28A.210.070 (preschool and kindergarten through grade twelve).

(39) "Sexually transmitted disease (STD)" means a bacterial, viral, fungal, or parasitic disease or condition which is usually transmitted through sexual contact, including:

(a) Acute pelvic inflammatory disease;

(b) Chancroid;

(c) *Chlamydia trachomatis* infection;

(d) Genital and neonatal Herpes simplex;

(e) Genital human papilloma virus infection;

(f) Gonorrhea;

(g) Granuloma inguinale;

(h) Hepatitis B infection;

(i) Human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS);

(j) Lymphogranuloma venereum;

(k) Nongonococcal urethritis (NGU); and

(l) Syphilis.

(40) "State health officer" means the person designated by the secretary of the department to serve as statewide health officer, or, in the absence of this designation, the person having primary responsibility for public health matters in the state.

(41) "Suspected case" means a person whose diagnosis is thought likely to be a particular disease or condition with suspected diagnosis based on signs and symptoms, laboratory evidence, or both.

(42) "Third-party payor" means an insurer regulated under Title 48 RCW authorized to transact business in this state or other jurisdiction, including a health care service contractor, and health maintenance organization; or an employee welfare benefit plan; or a state or federal health benefit program as defined in RCW 70.02.010.

(43) "Unexplained critical illness or death" means cases of illness or death with infectious hallmarks but no known etiology, in previously healthy persons one to forty-nine years of age excluding those with chronic medical conditions (e.g., malignancy, diabetes, AIDS, cirrhosis).

(44) "Veterinarian" means an individual licensed under provisions of chapter 18.92 RCW, Veterinary medicine, surgery, and dentistry and practicing animal health care.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-010, filed 11/22/00, effective 12/23/00.]

WAC 246-101-015 Provisional condition notification. This section describes how conditions can become notifiable; what period of time conditions are provisionally notifiable; what analyses must be accomplished during provisional notification status; the transition of provisionally notifiable conditions to permanent notification or deletion of notification requirements. The department's goal for provisionally notifiable conditions is to collect enough information to determine whether requiring notification improves public health.

(1) The state health officer may:

(a) Request reporting of cases and suspected cases of disease and conditions in addition to those required in Tables HC-1, Lab-1, and HF-1 on a provisional basis for a period of time less than forty-eight months when:

(i) The disease or condition is newly recognized or recently acknowledged as a public health concern;

(ii) Epidemiological investigation based on notification of cases may contribute to understanding of the disease or condition;

(iii) There is reason to expect that the information acquired through notification will assist the state and/or local health department to design or implement intervention strategies that will result in an improvement in public health; and

(iv) Written notification is provided to all local health officers regarding:

(A) Additional reporting requirements; and

(B) Rationale or justification for specifying the disease or condition as notifiable.

(b) Request laboratories to submit specimens indicative of infections in addition to those required in Table Lab-1 on a provisional basis for a period of time less than forty-eight months, if:

(i) The infection is of public health concern;

(ii) The department has a plan for using data gathered from the specimens; and

(iii) Written notification is provided to all local health officers and all laboratory directors explaining:

(A) Actions required; and

(B) Reason for the addition.

(2) Within forty months of the state health officer's designation of a condition as provisionally notifiable in subsection (1) of this section, or requests for laboratories to submit specimens indicative of infections in subsection (2) of this section, the department will conduct an evaluation for the notification requirement that:

(a) Estimates the societal cost resulting from the provisionally notifiable condition;

(i) Determine the prevalence of the provisional notifiable condition; and

(ii) Identify the quantifiable costs resulting from the provisionally notifiable condition; and

(iii) Discuss the qualitative costs resulting from the provisionally notifiable condition.

(b) Describes how the information was used and how it will continue to be used to design and implement intervention strategies aimed at combating the provisionally notifiable condition;

(2003 Ed.)

(c) Verifies the effectiveness of previous intervention strategies at reducing the incidence, morbidity, or mortality of the provisional notifiable condition;

(d) Identifies the quantitative and qualitative costs of the provisional notification requirement;

(e) Compares the costs of the provisional notification requirement with the estimated cost savings resulting from the intervention based on the information provided through the provisional notification requirement;

(f) Describes the effectiveness and utility of using the notifiable conditions process as a mechanism to collect these data; and

(g) Describes that a less burdensome data collection system (example: biennial surveys) would not provide the information needed to effectively establish and maintain the intervention strategies.

(3) Based upon the evaluation in subsection (2) of this section, the board will assess results of the evaluation after the particular condition is notifiable or the requirement for laboratories to submit specimens indicative of infections has been in place for no longer than forty months. The board will determine based upon the results of the evaluation whether the provisionally notifiable condition or the requirement for laboratories to submit specimens indicative of infections should be:

(a) Permanently notifiable in the same manner as the provisional notification requirement;

(b) Permanently notifiable in a manner that would use the evaluation results to redesign the notification requirements; or

(c) Deleted from the notifiable conditions system.

(4) The following conditions are provisionally notifiable through the date indicated:

(a) Autism (through August, 2004);

(b) Cerebral palsy (through August, 2004);

(c) Fetal alcohol syndrome/Fetal alcohol effects (through August, 2004);

(d) Hepatitis B, chronic - Initial diagnosis, and previously unreported prevalent cases (through August, 2004);

(e) Hepatitis C - Initial diagnosis, and previously unreported prevalent cases (through August, 2004);

(f) Herpes simplex (initial genital infection, only) (through August, 2004);

(g) Streptococcus, Group A (invasive disease only - indicated by blood, spinal fluid or other normally sterile site) (through August, 2004); and

(h) Birth defects - Abdominal wall defects (through August, 2004).

(5) The department shall have the authority to declare an emergency and institute notification requirements under the provisions of RCW 34.05.350.

[Statutory Authority: RCW 43.20.050, 00-23-120, § 246-101-015, filed 11/22/00, effective 12/23/00.]

WAC 246-101-101 Notifiable conditions and the health care provider. This section describes the conditions that Washington's health care providers must notify public health authorities of on a statewide basis. The board finds that the conditions in the table below (Table HC-1) are notifiable for the prevention and control of communicable and nonin-

fectious diseases and conditions in Washington. Principal health care providers shall notify public health authorities of these conditions as individual case reports using procedures described throughout this chapter. Other health care providers in attendance shall notify public health authorities of the following notifiable conditions, unless the condition notification has already been made. Local health officers may require

additional conditions to be notifiable within the local health officer's jurisdiction.

WAC 246-101-105, 246-101-110, 246-101-115, and 246-101-120 also include requirements for how notifications shall be made, when they shall be made, the content of these notifications, and how information regarding notifiable conditions cases must be handled and may be disclosed.

Table HC-1 (Conditions Notifiable by Health Care Providers)

Notifiable Condition	Time frame for Notification	Notifiable to Local Health Department	Notifiable to State Department of Health
Acquired Immunodeficiency Syndrome (AIDS)	Within 3 work days	√	
Animal Bites	Immediately	√	
Asthma, occupational	Monthly		√
Birth Defects – Autism (<i>Provisional through August, 2004</i>)	Monthly		√
Birth Defects – Cerebral Palsy (<i>Provisional through August, 2004</i>)	Monthly		√
Birth Defects – Fetal Alcohol Syndrome/Fetal Alcohol Effects (<i>Provisional through August, 2004</i>)	Monthly		√
Botulism (foodborne, infant, and wound)	Immediately	√	
Brucellosis (<i>Brucella</i> species)	Immediately	√	
Campylobacteriosis	Within 3 work days	√	
Chancroid	Within 3 work days	√	
<i>Chlamydia trachomatis</i> infection	Within 3 work days	√	
Cholera	Immediately	√	
Cryptosporidiosis	Within 3 work days	√	
Cyclosporiasis	Within 3 work days	√	
Diphtheria	Immediately	√	
Disease of suspected bioterrorism origin (including): • Anthrax • Smallpox	Immediately	√	
Disease of suspected foodborne origin (communicable disease clusters only)	Immediately	√	
Disease of suspected waterborne origin (communicable disease clusters only)	Immediately	√	
Encephalitis, viral	Within 3 work days	√	
Enterohemorrhagic <i>E. coli</i> (shiga-like toxin producing infections only) such as <i>E. coli</i> O157:H7 Infection	Immediately	√	
Giardiasis	Within 3 work days	√	
Gonorrhea	Within 3 work days	√	
Granuloma inguinale	Within 3 work days	√	

<i>Haemophilus influenzae</i> (invasive disease, children under age 5)	Immediately	√	
Hantavirus pulmonary syndrome	Within 3 work days	√	
Hemolytic uremic syndrome	Immediately	√	
Hepatitis A (acute infection)	Immediately	√	
Hepatitis B (acute infection)	Within 3 work days	√	
Hepatitis B surface antigen + pregnant women	Within 3 work days	√	
Hepatitis B (chronic) – Initial diagnosis, and previously unreported prevalent cases (Provisional through August, 2004)	Monthly	√	
Hepatitis C – Acute and chronic (Provisional through August, 2004)	Monthly	√	
Hepatitis (infectious), unspecified	Within 3 work days	√	
Herpes simplex, neonatal and genital (initial infection only) (Provisional through August, 2004)	Within 3 work days	√	
Human immunodeficiency virus (HIV) infection	Within 3 work days	√	
Legionellosis	Within 3 work days	√	
Leptospirosis	Within 3 work days	√	
Listeriosis	Immediately	√	
Lyme Disease	Within 3 work days	√	
Lymphogranuloma venereum	Within 3 work days	√	
Malaria	Within 3 work days	√	
Measles (rubeola)	Immediately	√	
Meningococcal disease	Immediately	√	
Mumps	Within 3 work days	√	
Paralytic shellfish poisoning	Immediately	√	
Pertussis	Immediately	√	
Pesticide poisoning (hospitalized, fatal, or cluster)	Immediately		√
Pesticide poisoning (all other)	Within 3 work days		√
Plague	Immediately	√	
Poliomyelitis	Immediately	√	
Psittacosis	Within 3 work days	√	
Q Fever	Within 3 work days	√	
Rabies (Confirmed Human or Animal)	Immediately	√	
Rabies (Including use of post-exposure prophylaxis)	Within 3 work days	√	
Relapsing fever (borreliosis)	Immediately	√	
Rubella (including congenital rubella syndrome)	Immediately	√	
Salmonellosis	Immediately	√	
Serious adverse reactions to immunizations	Within 3 work days	√	
Shigellosis	Immediately	√	

Streptococcus, Group A, Invasive (Indicated by blood, spinal fluid or other normally sterile site) (<i>Provisional through August, 2004</i>)	Within 3 work days	√	
Syphilis	Within 3 work days	√	
Tetanus	Within 3 work days	√	
Trichinosis	Within 3 work days	√	
Tuberculosis	Immediately	√	
Tularemia	Within 3 work days	√	
Typhus	Immediately	√	
Vibriosis	Within 3 work days	√	
Yellow fever	Immediately	√	
Yersiniosis	Within 3 work days	√	
Other rare diseases of public health significance	Immediately	√	
Unexplained critical illness or death	Immediately	√	

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-101, filed 11/22/00, effective 12/23/00.]

WAC 246-101-105 Duties of the health care provider. Health care providers shall:

(1) Notify the local health department where the patient resides (in the event that patient residence cannot be determined, notify the local health department where the health care providers practice) regarding:

(a) Cases or suspected cases of notifiable conditions specified as notifiable to local health departments in Table HC-1;

(b) Cases of conditions designated as notifiable by the local health officer within that health officer's jurisdiction;

(c) Outbreaks or suspected outbreaks of disease. These patterns include, but are not limited to, suspected or confirmed outbreaks of chickenpox, influenza, viral meningitis, nosocomial infection suspected due to contaminated food products or devices, or environmentally related disease;

(d) Known barriers which might impede or prevent compliance with orders for infection control or quarantine; and

(e) Name, address, and other pertinent information for any case, suspected case or carrier refusing to comply with prescribed infection control measures.

(2) Notify the department of health of conditions designated as notifiable to the local health department when:

(a) A local health department is closed or representatives of the local health department are unavailable at the time a case or suspected case of an immediately notifiable condition occurs;

(b) A local health department is closed or representatives of the local health department are unavailable at the time an outbreak or suspected outbreak of communicable disease occurs.

(3) Notify the department of pesticide poisoning that is fatal, causes hospitalization or occurs in a cluster.

(4) Notify the department as specified in Table HC-1 regarding cases of notifiable conditions specified as notifiable to the department.

(5) Assure that positive cultures and preliminary test results for notifiable conditions of specimens referred to lab-

oratories outside of Washington for testing are correctly notified to the local health department of the patient's residence or the department as specified in Table Lab-1. This requirement can be satisfied by:

(a) Arranging for the referral laboratory to notify either the local health department, the department, or both; or

(b) Forwarding the notification of the test result from the referral laboratory to the local health department, the department, or both.

(6) Cooperate with public health authorities during investigation of:

(a) Circumstances of a case or suspected case of a notifiable condition or other communicable disease; and

(b) An outbreak or suspected outbreak of disease.

(7) Provide adequate and understandable instruction in disease control measures to each patient who has been diagnosed with a case of a communicable disease, and to contacts who may have been exposed to the disease.

(8) Maintain responsibility for deciding date of discharge for hospitalized tuberculosis patients.

(9) Notify the local health officer of intended discharge of tuberculosis patients in order to assure appropriate outpatient arrangements are arranged.

[Statutory Authority: RCW 43.20.050 and 70.104.030. 00-23-120, § 246-101-105, filed 11/22/00, effective 12/23/00.]

WAC 246-101-110 Means of notification. (1) Conditions designated as:

(a) Immediately notifiable must be reported by telephone or by secure facsimile copy of a written case report to the local health officer or the department as specified in Table HC-1;

(b) Notifiable within three working days must be reported by written case report or secure facsimile copy to the local health officer or department as specified in Table HC-1; and

(c) Notifiable on a monthly basis must be reported by written case report or secure facsimile copy to the local health officer or the department as specified in Table HC-1.

(2) The local health officer may authorize notifications by telephone or secure electronic transmission for cases and suspected cases of notifiable conditions specified as notifiable to local health departments.

(3) The state health officer may authorize notifications by telephone or secure electronic transmission for cases and suspected cases of notifiable conditions specified as notifiable to the department.

[Statutory Authority: RCW 43.20.050, 70.24.125, 70.28.010 and 70.104.030. 00-23-120, § 246-101-110, filed 11/22/00, effective 12/23/00.]

WAC 246-101-115 Content of notifications. (1) For each condition listed in Table HC-1, health care providers must provide the following information for each case or suspected case:

- (a) Name;
- (b) Address;
- (c) Telephone number;
- (d) Date of birth;
- (e) Sex;
- (f) Diagnosis or suspected diagnosis of disease or condition;
- (g) Pertinent laboratory data, if available;
- (h) Name and address or telephone number of the principal health care provider;
- (i) Name and address or telephone number of the person providing the report; and
- (j) Other information as the department may require on forms generated by the department.

(2) The local health officer or state health officer may require other information of epidemiological or public health value.

[Statutory Authority: RCW 43.20.050, 43.70.545, 70.24.125, 70.28.010 and 70.104.030. 00-23-120, § 246-101-115, filed 11/22/00, effective 12/23/00.]

WAC 246-101-120 Handling of case reports and medical information. (1) All records and specimens containing or accompanied by patient identifying information are confidential.

(2) Health care providers who know of a person with a notifiable condition, other than a sexually transmitted disease, shall release identifying information only to other individuals responsible for protecting the health and well-being of the public through control of disease.

(3) Health care providers with knowledge of a person with sexually transmitted disease, and following the basic principles of health care providers, which respect the human dignity and confidentiality of patients:

- (a) May disclose identity of a person or release identifying information only as specified in RCW 70.24.105; and

(b) Shall under RCW 70.24.105(6), use only the following customary methods for exchange of medical information:

(i) Health care providers may exchange medical information related to HIV testing, HIV test results, and confirmed HIV or confirmed STD diagnosis and treatment in order to provide health care services to the patient. This means that information shared impacts the care or treatment decisions concerning the patient; and the health care provider requires the information for the patient's benefit.

(ii) Health care providers responsible for office management are authorized to permit access to a patient's medical information and medical record by medical staff or office staff to carry out duties required for care and treatment of a patient and the management of medical information and the patient's medical record.

(c) Health care providers conducting a clinical HIV research project shall report the identity of an individual participating in the project unless:

(i) The project has been approved by an institutional review board; and

(ii) The project has a system in place to remind referring health care providers of their reporting obligations under this chapter.

(4) Health care providers shall establish and implement policies and procedures to maintain confidentiality related to a patient's medical information.

[Statutory Authority: RCW 43.20.050 and 70.104.030. 00-23-120, § 246-101-120, filed 11/22/00, effective 12/23/00.]

WAC 246-101-201 Notifiable conditions and laboratories. This section describes the conditions about which Washington's laboratories must notify public health authorities of on a statewide basis. The board finds that the conditions in the table below (Table Lab-1) are notifiable for the prevention and control of communicable and noninfectious diseases and conditions in Washington. The board also finds that submission of specimens for many of these conditions will further prevent the spread of disease. Laboratory directors shall notify public health authorities of positive cultures and preliminary test results as individual case reports and provide specimen submissions using procedures described throughout this chapter. Local health officers may require additional conditions to be notifiable within the local health officer's jurisdiction.

WAC 246-101-205, 246-101-210, 246-101-215, 246-101-220, 246-101-225, and 246-101-230 also include requirements for how notifications and specimen submissions are made, when they are made, the content of these notifications and specimen submissions, and how information regarding notifiable conditions cases must be handled and may be disclosed.

Table Lab-1 (Conditions Notifiable by Laboratory Directors)

Notifiable Condition	Time frame for Notification	Notifiable to Local Health Department	Notifiable to Department of Health	Specimen Submission to Department of Health (Type & Timing)
Blood Lead Level	Elevated Levels – 2 Days Nonelevated Levels – Monthly		√	
Botulism (Foodborne)	Immediately	√		Serum and Stool - If available, submit suspect foods (2 days)
Botulism (Infant)	Immediately	√		Stool (2 days)
Botulism (Wound)	Immediately	√		Culture, Serum, Debrided tissue, or Swab sample (2 days)
Brucellosis (<i>Brucella</i> species)	2 days	√		Subcultures (2 days)
CD4+ (T4) lymphocyte counts less than 200 and/or CD4+ (T4) percents less than fourteen percent of total lymphocytes (patients aged thirteen or older)	Monthly	Only when the local health department is designated by the Department of Health	√	
<i>Chlamydia trachomatis</i> infection	2 days	√		
Cholera	Immediately	√		Culture (2 days)
Cryptosporidiosis	2 days	√		
Cyclosporiasis	2 days	√		Specimen (2 days)
Diphtheria	2 days	√		Culture (2 days)
Disease of Suspected Bioterrorism Origin (examples): • Anthrax • Smallpox	Immediately	√		Culture (2 days)
Enterohemorrhagic <i>E. coli</i> (shiga-like toxin producing infections only) such as <i>E. coli</i> O157:H7 Infection	2 days	√		Culture (2 days)
Gonorrhea	2 days	√		
Hepatitis A (IgM positive)	2 days	√		
Human immunodeficiency virus (HIV) infection (including positive Western Blot assays, P24 antigen or viral culture tests)	2 days	Only when the local health department is designated by the Department of Health	√ (Except King County)	
Human immunodeficiency virus (HIV) infection (positive results on HIV nucleic acid tests (RNA or DNA))	Monthly	Only when the local health department is designated by the Department of Health	√ (Except King County)	
Listeriosis	2 days	√		
Measles (rubeola)	Immediately	√		Serum (2 days)
Meningococcal disease	2 days	√		Culture (Blood/CSF or other sterile sites) (2 days)
Pertussis	2 days	√		
Plague	Immediately	√		Culture or other appropriate clinical material (2 days)

Notifiable Condition	Time frame for Notification	Notifiable to Local Health Department	Notifiable to Department of Health	Specimen Submission to Department of Health (Type & Timing)
Rabies (human or animal)	Immediately	√ (Pathology Report Only)		Tissue or other appropriate clinical material (Upon request only)
Salmonellosis	2 days	√		Culture (2 days)
Shigellosis	2 days	√		Culture (2 days)
Syphilis				Serum (2 days)
Tuberculosis	2 days		√	Culture (2 days)
Tuberculosis (Antibiotic sensitivity for first isolates)	2 days		√	
Tularemia				Culture or other appropriate clinical material (2 days)
Other rare diseases of public health significance	Immediately	√		

Additional notifications that are requested but not mandatory include:

(1) Laboratory directors may notify either local health departments or the department or both of other laboratory results including hepatitis B and hepatitis C through cooperative agreement.

(2) Laboratory directors may submit malaria cultures to the state public health laboratories.

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-201, filed 11/22/00, effective 12/23/00.]

WAC 246-101-205 Responsibilities and duties of the laboratory director. Laboratory directors shall:

(1) Notify the local health department where the patient resides (in the event that patient residence cannot be determined, notify the local health department where the laboratory is located) regarding:

(a) Positive cultures and preliminary test results of notifiable conditions specified as notifiable to the local health department in Table Lab-1.

(b) Positive cultures and preliminary test results of conditions specified as notifiable by the local health officer within that health officer's jurisdiction.

(2) If the laboratory is unable to determine the local health department of the patient's residence, the laboratory director shall notify the local health department in which the health care provider that ordered the laboratory test is located.

(3) Notify the department of health of conditions designated as notifiable to the local health department when:

(a) A local health department is closed or representatives of the local health department are unavailable at the time a positive culture or preliminary test results of an immediately notifiable condition occurs;

(b) A local health department is closed or representatives of the local health department are unavailable at the time an outbreak or suspected outbreak of communicable disease occurs.

(4) Notify the department of positive cultures and preliminary test results for conditions designated notifiable to the department in Table Lab-1.

(5) Notify the department of nonelevated blood lead levels on a monthly basis.

(2003 Ed.)

(6) Submit specimens for conditions noted in Table Lab-1 to the Washington state public health laboratories or other laboratory designated by the state health officer for diagnosis, confirmation, storage, or further testing.

(7) Ensure that positive cultures and preliminary test results for notifiable conditions of specimens referred to other laboratories for testing are correctly notified to the correct local health department or the department. This requirement can be satisfied by:

(a) Arranging for the referral laboratory to notify either the local health department, the department, or both; or

(b) Forwarding the notification of the test result from the referral laboratory to the local health department, the department, or both.

(8) Cooperate with public health authorities during investigation of:

(a) Circumstances of a case or suspected case of a notifiable condition or other communicable disease; and

(b) An outbreak or suspected outbreak of disease.

(9) Laboratory directors may designate responsibility for working and cooperating with public health authorities to certain employees as long as designated employees are:

(a) Readily available; and

(b) Able to provide requested information in a timely manner.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-205, filed 11/22/00, effective 12/23/00.]

WAC 246-101-210 Means of specimen submission.

Required laboratory specimen submissions as outlined in Table Lab-1 shall be forwarded within two days. Laboratories shall follow the procedures below in submitting specimens:

(1) Laboratories located in King County shall forward required specimen submissions (except tuberculosis cultures) to:

Public Health Seattle and King County - Laboratory
 325 9th Avenue
 Box 359973
 Seattle, WA 98104-2499

(2) Laboratories located in King County shall forward required tuberculosis cultures to:

Washington State Public Health Laboratories
 Washington State Department of Health
 1610 NE 150th Street
 Seattle, WA 98155

(3) Laboratories located outside of King County shall forward all required specimen submissions to:

Washington State Public Health Laboratories
 Washington State Department of Health
 1610 NE 150th Street
 Seattle, WA 98155

(4) The state health officer may designate additional laboratories as public health referral laboratories.

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-210, filed 11/22/00, effective 12/23/00.]

WAC 246-101-215 Content of documentation accompanying specimen submission. For each condition listed in Table Lab-1, laboratory directors must provide the following information with each specimen submission:

- (1) Type of specimen tested;
- (2) Name of reporting laboratory;
- (3) Telephone number of reporting laboratory;
- (4) Date specimen collected;
- (5) Requesting health care provider's name;
- (6) Requesting health care provider's phone number or address, or both;
- (7) Test result;
- (8) Name of patient (if available), or patient identifier otherwise;
- (9) Sex of patient (if available);
- (10) Date of birth of patient (if available);
- (11) Address of patient (if available);
- (12) Telephone number of patient (if available);
- (13) Other information of epidemiological value (if available).

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-215, filed 11/22/00, effective 12/23/00.]

WAC 246-101-220 Means of notification for positive cultures or preliminary test results. (1) Conditions designated as:

(a) Notifiable within two days must be reported by written case report or secure facsimile copy to the local health officer or the department as specified in Table Lab-1 within two working days; and

(b) Notifiable on a monthly basis must be reported by written case report or secure facsimile copy to the local health officer or the department as specified in Table Lab-1.

(2) The local health officer may authorize notifications by telephone or secure electronic transmission for cases and suspected cases of notifiable conditions specified as notifiable to local health departments.

(3) The state health officer may authorize notifications by telephone or secure electronic transmission for cases and suspected cases of notifiable conditions specified as notifiable to the department.

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-220, filed 11/22/00, effective 12/23/00.]

[Title 246 WAC—p. 140]

WAC 246-101-225 Content of notifications for positive cultures or preliminary test results. (1) For each condition listed in Table Lab-1, laboratory directors must provide the following information for each positive culture or suggestive test result:

- (a) Type of specimen tested;
- (b) Name of reporting laboratory;
- (c) Telephone number of reporting laboratory;
- (d) Date specimen collected;
- (e) Date specimen received by reporting laboratory;
- (f) Requesting health care provider's name;
- (g) Requesting health care provider's phone number or address, or both;
- (h) Test result;
- (i) Name of patient (if available), or patient identifier otherwise;
- (j) Sex of patient (if available);
- (k) Date of birth or age of patient (if available); and
- (l) Other information of epidemiological value (if available).

(2) Local health officers and the state health officer may require laboratory directors to report other information of epidemiological or public health value.

[Statutory Authority: RCW 43.20.050, 43.70.545, 70.24.125 and 70.28.010. 00-23-120, § 246-101-225, filed 11/22/00, effective 12/23/00.]

WAC 246-101-230 Handling of case reports and medical information. (1) All records and specimens containing or accompanied by patient identifying information are confidential. The Washington state public health laboratories, other laboratories approved as public health referral laboratories, and any persons, institutions, or facilities submitting specimens or records containing patient-identifying information shall maintain the confidentiality of identifying information accompanying submitted laboratory specimens.

(2) Laboratory directors shall establish and implement policies and procedures to maintain confidentiality related to a patient's medical information.

(3) Laboratory directors and personnel working in laboratories who know of a person with a notifiable condition, other than a sexually transmitted disease, shall release identifying information only to other individuals responsible for protecting the health and well-being of the public through control of disease.

(4) Laboratory directors and personnel working in laboratories with knowledge of a person with sexually transmitted disease, and following the basic principles of health care providers, which respect the human dignity and confidentiality of patients:

(a) May disclose identity of a person or release identifying information only as specified in RCW 70.24.105; and

(b) Shall under RCW 70.24.105(6), use only the following customary methods for exchange of medical information:

(i) Laboratory directors and personnel working in laboratories may exchange medical information related to HIV testing, HIV test results, and confirmed HIV or confirmed STD diagnosis and treatment in order to provide health care services to the patient. This means that information shared impacts the care or treatment decisions concerning the patient; and the laboratory director or personnel working in

(2003 Ed.)

the laboratory requires the information for the patient's benefit.

(ii) Laboratory directors are authorized to permit access to a patient's medical information and medical record by laboratory staff or office staff to carry out duties required for care and treatment of a patient and the management of medical information and the patient's medical record.

[Statutory Authority: RCW 43.20.050, 00-23-120, § 246-101-230, filed 11/22/00, effective 12/23/00.]

WAC 246-101-301 Notifiable conditions and health care facilities. This section describes the conditions that Washington's health care facilities must notify public health authorities of on a statewide basis. The board finds that the conditions in the table below (Table HF-1) are notifiable for the prevention and control of communicable and noninfec-

tious diseases and conditions. Local health officers may require additional conditions to be notifiable within the local health officer's jurisdiction. Health care facilities are required to notify public health authorities of cases that occur in their facilities. Health care facilities may choose to assume the notification for their health care providers for conditions designated in Table HF-1. Health care facilities may not assume the reporting requirements of laboratories that are components of the health care facility. Local health officers may require additional conditions to be notifiable within the local health officer's jurisdiction.

WAC sections 246-101-305, 246-101-310, 246-101-315, and 246-101-320 also include requirements for how notifications shall be made, when they are made, the content of these notifications, and how information regarding notifiable conditions cases must be handled and may be disclosed.

Table HF-1 (Conditions Notifiable by Health Care Facilities)

Notifiable Condition	Time frame for Notification	Notifiable to Local Health Department	Notifiable to State Department of Health
Acquired Immunodeficiency Syndrome (AIDS)	Within 3 work days		√
Animal Bites	Immediately	√	
Asthma, occupational	Monthly		√
Birth Defects – Abdominal Wall Defects (inclusive of gastroschisis and omphalocele) (<i>Provisional through August, 2004</i>)	Monthly		√
Birth Defects – Autism (<i>Provisional through August, 2004</i>)	Monthly		√
Birth Defects – Cerebral Palsy (<i>Provisional through August, 2004</i>)	Monthly		√
Birth Defects – Down Syndrome	Monthly		√
Birth Defects – Fetal Alcohol Syndrome/Fetal Alcohol Effects (<i>Provisional through August, 2004</i>)	Monthly		√
Birth Defects – Hypospadias	Monthly		√
Birth Defects – Limb reductions	Monthly		√
Birth Defects – Neural Tube Defects (inclusive of anencephaly and spina bifida)	Monthly		√
Birth Defects – Oral Clefts (inclusive of cleft lip with/without cleft palate)	Monthly		√
Botulism (foodborne, infant, and wound)	Immediately	√	
Brucellosis (<i>Brucella</i> species)	Immediately	√	
Cancer (<i>See chapter 246-430 WAC</i>)	Monthly		√
Chancroid	Within 3 work days	√	

<i>Chlamydia trachomatis</i> infection	Within 3 work days	√	
Cholera	Immediately	√	
Cryptosporidiosis	Within 3 work days	√	
Cyclosporiasis	Within 3 work days	√	
Diphtheria	Immediately	√	
Disease of suspected bioterrorism origin (including): • Anthrax • Smallpox	Immediately	√	
Disease of suspected food-borne origin (communicable disease clusters only)	Immediately	√	
Disease of suspected water-borne origin (communicable disease clusters only)	Immediately	√	
Encephalitis, viral	Within 3 work days	√	
Enterohemorrhagic <i>E. coli</i> (shiga-like toxin producing infections only) such as <i>E. coli</i> O157:H7 Infection	Immediately	√	
Giardiasis	Within 3 work days	√	
Gonorrhea	Within 3 work days	√	
Granuloma inguinale	Within 3 work days	√	
Gunshot wounds (nonfatal)	Monthly		√
<i>Haemophilus influenzae</i> (invasive disease, children under age 5)	Immediately	√	
Hantavirus pulmonary syndrome	Within 3 work days	√	
Hemolytic uremic syndrome	Immediately	√	
Hepatitis A (acute infection)	Immediately	√	
Hepatitis B (acute infection)	Within 3 work days	√	
Hepatitis B surface antigen+ pregnant women	Within 3 work days	√	
Hepatitis B (chronic) – Initial diagnosis, and previously unreported prevalent cases (Provisional through August, 2004)	Monthly	√	
Hepatitis C – Acute and chronic (Provisional through August, 2004)	Monthly	√	
Hepatitis (infectious), unspecified	Within 3 work days	√	
Human immunodeficiency virus (HIV) infection	Within 3 work days	√	
Legionellosis	Within 3 work days	√	
Leptospirosis	Within 3 work days	√	
Listeriosis	Immediately	√	
Lyme Disease	Within 3 work days	√	
Lymphogranuloma venereum	Within 3 work days	√	
Malaria	Within 3 work days	√	
Measles (rubeola)	Immediately	√	
Meningococcal disease	Immediately	√	
Mumps	Within 3 work days	√	

Paralytic shellfish poisoning	Immediately	√	
Pertussis	Immediately	√	
Pesticide poisoning (hospitalized, fatal, or cluster)	Immediately		√
Plague	Immediately	√	
Poliomyelitis	Immediately	√	
Psittacosis	Within 3 work days	√	
Q Fever	Within 3 work days	√	
Rabies (Confirmed Human or Animal)	Immediately	√	
Rabies (Use of post-exposure prophylaxis)	Within 3 work days	√	
Relapsing fever (borreliosis)	Immediately	√	
Rubella (including congenital rubella syndrome)	Immediately	√	
Salmonellosis	Immediately	√	
Serious adverse reactions to immunizations	Within 3 work days	√	
Shigellosis	Immediately	√	
Streptococcus, Group A Invasive (Indicated by blood, spinal fluid or other normally sterile site) (<i>Provisional through August, 2004</i>)	Within 3 work days	√	
Syphilis	Within 3 work days	√	
Tetanus	Within 3 work days	√	
Trichinosis	Within 3 work days	√	
Tuberculosis	Immediately	√	
Tularemia	Within 3 work days	√	
Typhus	Immediately	√	
Vibriosis	Within 3 work days	√	
Yellow fever	Immediately	√	
Yersiniosis	Within 3 work days	√	
Other rare diseases of public health significance	Immediately	√	
Unexplained critical illness or death	Immediately	√	

[Statutory Authority: RCW 43.20.050, 43.70.545, 70.24.125, 70.28.010 and 70.104.030. 00-23-120, § 246-101-301, filed 11/22/00, effective 12/23/00.]

WAC 246-101-305 Duties of the health care facility.

Health care facilities shall:

(1) Notify the local health department where the patient resides (in the event that patient residence cannot be determined, notify the local health department where the health care facility is located) regarding:

(a) Cases of notifiable conditions specified as notifiable to the local health department in Table HF-1 that occur or are treated in the health care facility.

(b) Cases of conditions specified as notifiable by the local health officer within that health officer's jurisdiction that occur or are treated in the health care facility.

(c) Suspected cases of notifiable conditions for conditions that are designated immediately notifiable that occur or are treated in the health care facility.

(d) Outbreaks or suspected outbreaks of disease that occur or are treated in the health care facility. These patterns include, but are not limited to, suspected or confirmed out-

breaks of chickenpox, influenza, viral meningitis, nosocomial infection suspected due to contaminated products or devices, or environmentally related disease. Reports of outbreaks and suspected outbreaks of disease are to be made to the local health officer.

(e) Known barriers which might impede or prevent compliance with orders for infection control or quarantine; and

(f) Name, address, and other pertinent information for any case, suspected case or carrier refusing to comply with prescribed infection control measures.

(2) Notify the department of health of conditions designated as notifiable to the local health department when:

(a) A local health department is closed or representatives of the local health department are unavailable at the time a case or suspected case of an immediately notifiable condition occurs;

(b) A local health department is closed or representatives of the local health department are unavailable at the time an

outbreak or suspected outbreak of communicable disease occurs.

(3) Notify the department as specified in Table HF-1 regarding cases of notifiable conditions specified as notifiable to the department.

(4) Notify the department of cancer incidence as required by chapter 246-430 WAC.

(5) Ensure that positive cultures and preliminary test results for notifiable conditions of specimens referred to laboratories outside of Washington for testing are correctly notified to the correct local health department as specified in Table Lab-1. This requirement can be satisfied by:

(a) Arranging for the referral laboratory to notify either the local health department, the department, or both; or

(b) Receiving the test result from the referral laboratory, and forwarding the notification to the local health department, the department, or both.

(6) Cooperate with public health authorities during investigation of:

(a) Circumstances of a case or suspected case of a notifiable condition or other communicable disease; and

(b) An outbreak or suspected outbreak of disease.

(7) Provide adequate and understandable instruction in disease control measures to each patient who has been diagnosed with a case of a communicable disease, and to contacts who may have been exposed to the disease.

(8) Maintain an infection control program as described in WAC 246-320-265.

(9) Health care facilities may assume the burden of notification for health care providers practicing within the health care facility where more than one health care provider is in attendance for a patient with a notifiable condition.

(10) Health care facilities may not assume the burden of notification for laboratories within the health care facility. Laboratories within a health care facility must submit specimens to the Washington state public health laboratories and notify public health authorities of notifiable conditions as specified in Table Lab-1.

[Statutory Authority: RCW 43.20.050, 43.70.545 and 70.104.030. 00-23-120, § 246-101-305, filed 11/22/00, effective 12/23/00.]

WAC 246-101-310 Means of notification. (1) Conditions designated as:

(a) Immediately notifiable must be reported by telephone or by secure facsimile copy of a written case report to the local health officer or the department as specified in Table HF-1;

(b) Notifiable within three working days must be reported by written case report or secure facsimile copy to the local health officer or department as specified in Table HF-1; and

(c) Notifiable on a monthly basis must be reported by written case report or secure facsimile copy to the local health officer or the department as specified in Table HF-1.

(2) The local health officer may authorize notifications by telephone or secure electronic transmission for cases and suspect cases of notifiable conditions specified as notifiable to local health departments.

(3) The state health officer may authorize notifications by telephone or secure electronic transmission for cases and

suspected cases of notifiable conditions specified as notifiable to the department.

[Statutory Authority: RCW 43.20.050, 70.24.125, 70.28.010 and 70.104.030. 00-23-120, § 246-101-310, filed 11/22/00, effective 12/23/00.]

WAC 246-101-315 Content of notifications. (1) For each condition listed in Table HF-1, health care facilities must provide the following information for each case or suspected case:

(a) Name;

(b) Address;

(c) Telephone number;

(d) Date of birth;

(e) Sex;

(f) Diagnosis or suspected diagnosis of disease or condition;

(g) Pertinent laboratory data (if available);

(h) Name and address or telephone number of the principal health care provider;

(i) Name and address or telephone number of the person providing the report; and

(j) Other information as the department may require on forms generated by the department.

(2) The local health officer or state health officer may require other information of epidemiological or public health value.

[Statutory Authority: RCW 43.20.050, 43.70.545, 70.24.125, 70.28.010 and 70.104.030. 00-23-120, § 246-101-315, filed 11/22/00, effective 12/23/00.]

WAC 246-101-320 Handling of case reports and medical information. (1) All records and specimens containing or accompanied by patient identifying information are confidential.

(2) Personnel in health care facilities who know of a person with a notifiable condition, other than a sexually transmitted disease, shall release identifying information only to other individuals responsible for protecting the health and well-being of the public through control of disease.

(3) Personnel in health care facilities with knowledge of a person with sexually transmitted disease, and following the basic principles of health care providers, which respect the human dignity and confidentiality of patients:

(a) May disclose identity of a person or release identifying information only as specified in RCW 70.24.105; and

(b) Shall under RCW 70.24.105(6), use only the following customary methods for exchange of medical information:

(i) Health care providers may exchange medical information related to HIV testing, HIV test results, and confirmed HIV or confirmed STD diagnosis and treatment in order to provide health care services to the patient.

(ii) This means that information shared impacts the care or treatment decisions concerning the patient; and the health care provider requires the information for the patient's benefit.

(4) Personnel responsible for health care facility management are authorized to permit access to medical information as necessary to fulfill professional duties. Health care facility administrators shall advise those persons permitted access under this section of the requirement to maintain confidentiality of such information as defined under this section

and chapter 70.24 RCW. Professional duties means the following or functionally similar activities:

- (a) Medical record or chart audits;
 - (b) Peer reviews;
 - (c) Quality assurance;
 - (d) Utilization review purposes;
 - (e) Research as authorized under chapters 42.48 and 70.02 RCW;
 - (f) Risk management; and
 - (g) Reviews required under federal or state law or rules.
- (5) Personnel responsible for health care facility management are authorized to permit access to a patient's medical information and medical record by medical staff or health care facility staff to carry out duties required for care and treatment of a patient and the management of medical information and the patient's medical record.

(6) Health care facilities conducting a clinical HIV research project shall report the identity of an individual participating in the project unless:

- (a) The project has been approved by an institutional review board; and
- (b) The project has a system in place to remind referring health care providers of their reporting obligations under this chapter.

(7) Health care facilities shall establish and implement policies and procedures to maintain confidentiality related to a patient's medical information.

[Statutory Authority: RCW 43.20.050, 43.70.545 and 70.104.030. 00-23-120, § 246-101-320, filed 11/22/00, effective 12/23/00.]

WAC 246-101-401 Notifiable conditions and the responsibilities and duties of others. WAC 246-101-405, 246-101-410, 246-101-415, 246-101-420, and 246-101-425 describe the responsibilities and duties of veterinarians, food service establishments, child day care centers, schools, and the general public regarding notifiable conditions and their obligations to cooperate with public health authorities during the investigation of cases, suspected cases, outbreaks and suspected outbreaks.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-401, filed 11/22/00, effective 12/23/00.]

WAC 246-101-405 Responsibilities of veterinarians. Veterinarians shall:

(1) Notify the local health officer of any suspected case or suspected outbreak of any disease listed in Table HC-1 that is transmissible from animals to humans. Examples of these zoonotic diseases include:

- (a) Anthrax;
- (b) Brucellosis;
- (c) Encephalitis, viral;
- (d) Plague;
- (e) Rabies;
- (f) Psittacosis;
- (g) Tuberculosis; and
- (h) Tularemia.

(2) Cooperate with public health authorities in the investigation of cases and suspected cases, or outbreaks and suspected outbreaks of zoonotic disease.

(2003 Ed.)

(3) Cooperate with public health authorities in the implementation of infection control measures including isolation and quarantine.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-405, filed 11/22/00, effective 12/23/00.]

WAC 246-101-410 Responsibilities of food service establishments. The person in charge of a food service establishment shall:

(1) Notify the local health department of potential foodborne disease as required in WAC 246-215-260.

(2) Cooperate with public health authorities in the investigation of cases and suspected cases, or outbreaks and suspected outbreaks of foodborne or waterborne disease. This includes the release of the name and other pertinent information about food handlers diagnosed with a communicable disease as it relates to a foodborne or waterborne disease investigation.

(3) Not release information about food handlers with a communicable disease to other employees or the general public.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-410, filed 11/22/00, effective 12/23/00.]

WAC 246-101-415 Responsibilities of child day care facilities. Child day care facilities shall:

(1) Notify the local health department of cases or suspected cases, or outbreaks and suspected outbreaks of notifiable conditions that may be associated with the child day care facility.

(2) Consult with a health care provider or the local health department for information about the control and prevention of infectious or communicable disease, as necessary.

(3) Cooperate with public health authorities in the investigation of cases and suspected cases, or outbreaks and suspected outbreaks of disease that may be associated with the child day care facility.

(4) Child day care facilities shall establish and implement policies and procedures to maintain confidentiality related to medical information in their possession.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-415, filed 11/22/00, effective 12/23/00.]

WAC 246-101-420 Responsibilities of schools. Schools shall:

(1) Notify the local health department of cases or suspected cases, or outbreaks and suspected outbreaks of disease that may be associated with the school.

(2) Cooperate with the local health department in monitoring influenza.

(3) Consult with a health care provider or the local health department for information about the control and prevention of infectious or communicable disease, as necessary.

(4) Cooperate with public health authorities in the investigation of cases and suspected cases, or outbreaks and suspected outbreaks of disease that may be associated with the school.

(5) Personnel in schools who know of a person with a notifiable condition shall release identifying information

only to other individuals responsible for protecting the health and well-being of the public through control of disease.

(6) Schools shall establish and implement policies and procedures to maintain confidentiality related to medical information in their possession.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-420, filed 11/22/00, effective 12/23/00.]

WAC 246-101-425 Responsibilities of the general public. (1) Members of the general public shall:

(a) Cooperate with public health authorities in the investigation of cases and suspected cases, or outbreaks and suspected outbreaks of notifiable conditions or other communicable diseases; and

(b) Cooperate with the implementation of infection control measures, including isolation and quarantine.

(2) Members of the general public may notify the local health department of any case or suspected case, or outbreak or potential outbreak of communicable disease.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-425, filed 11/22/00, effective 12/23/00.]

WAC 246-101-501 Notifiable conditions and local health departments. This section describes the authorities and responsibilities of local health officers and local health departments in collecting, analyzing, investigating and transmitting case information from notifiable conditions case reports.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-501, filed 11/22/00, effective 12/23/00.]

WAC 246-101-505 Duties of the local health officer or the local health department. Local health officers or the local health department shall:

(1) Review and determine appropriate action for:

(a) Each reported case or suspected case of a notifiable condition;

(b) Any disease or condition considered a threat to public health;

(c) Each reported outbreak or suspected outbreak of disease, requesting assistance from the department in carrying out investigations when necessary; and

(d) Instituting disease prevention and infection control, isolation, detention, and quarantine measures necessary to prevent the spread of communicable disease, invoking the power of the courts to enforce these measures when necessary.

(2) Establish a system at the local health department for maintaining confidentiality of written records and written and telephoned notifiable conditions case reports;

(3) Notify health care providers, laboratories, and health care facilities within the jurisdiction of the health department of requirements in this chapter;

(4) Notify the department of cases of any condition notifiable to the local health department (except animal bites) upon completion of the case investigation;

(5) Distribute appropriate notification forms to persons responsible for reporting;

(6) Notify the principal health care provider:

(a) If possible, prior to initiating a case investigation by the local health department; and

(b) For HIV infection, not contact the HIV-infected person directly without considering the recommendations of the principal health care provider on the necessity and best means for conducting the case investigation, unless:

(i) The principal health care provider cannot be identified; or

(ii) Reasonable efforts to reach the principal health care provider over a two-week period of time have failed;

(7) Allow laboratories to contact the health care provider ordering the diagnostic test before initiating patient contact if requested and the delay is unlikely to jeopardize public health;

(8) Conduct investigations and institute control measures consistent with those indicated in the seventeenth edition, 2000 of *Control of Communicable Diseases Manual*, edited by James Chin, published by the American Public Health Association (copy is available for review at the department and at each local health department), except:

(a) When superseded by more up-to-date measures; or

(b) When other measures are more specifically related to Washington state;

(9) The local health department may negotiate alternate arrangements for meeting the reporting requirements under this chapter through cooperative agreement between the local health department and any health care provider, laboratory or health care facility;

(10) Each local health officer has the authority to:

(a) Carry out additional steps determined to be necessary to verify a diagnosis reported by a health care provider;

(b) Require any person suspected of having a reportable disease or condition to submit to examinations required to determine the presence of the disease or condition;

(c) Investigate any case or suspected case of a reportable disease or condition or other illness, communicable or otherwise, if deemed necessary;

(d) Require the notification of additional conditions of public health importance occurring within the jurisdiction of the local health officer.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-505, filed 11/22/00, effective 12/23/00.]

WAC 246-101-510 Means of notification. Local health departments shall:

(1) Notify the department immediately by telephone or secure electronic data transmission of any notification of a case or suspected case of:

(a) Botulism;

(b) Cholera;

(c) Disease of suspected bioterrorism origin (examples: Anthrax, plague, smallpox);

(d) Hemolytic uremic syndrome;

(e) Measles;

(f) Paralytic shellfish poisoning;

(g) Poliomyelitis; and

(h) Unexplained critical illness or death.

(2) Immediate notifications of cases and suspected cases must include:

(a) Name;

(b) Condition; and

(c) Onset date.

(3) Notify the department immediately by telephone or secure electronic data transmission of any notification of an outbreak or suspected outbreak of foodborne or waterborne or other communicable disease.

(4) For outbreaks or suspected outbreaks of foodborne or waterborne disease, notifications must include:

(a) Organism or suspected organism;

(b) Source or suspected source; and

(c) Number of persons affected.

(5) Submit a written case report either on a form provided by the department or in a format approved by the department for each case of any condition notifiable to the local health department, except animal bites, within seven days of completing the case investigation. The department may waive this requirement if telephone or secure electronic data transmission provided pertinent information.

(6) Local health officials will report asymptomatic HIV infection cases to the department according to a standard code developed by the department.

(7) For any case not immediately notifiable to the department forward pertinent information collected on the case investigation for each case of any condition notifiable to the local health department to the department if the case investigation is not complete within twenty-one days of notification, including:

(a) Name;

(b) Condition or suspected condition;

(c) Source or suspected source; and

(d) Onset date.

(8) Submit a written report on forms provided by the department or in a format approved by the department for an outbreak of any notifiable condition within seven days of completing the investigation. The department may waive this requirement if telephone or secure electronic data transmission provided pertinent information.

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-510, filed 11/22/00, effective 12/23/00.]

WAC 246-101-515 Handling of case reports and medical information. (1) Local health officers or local health departments shall establish and maintain confidentiality procedures related to employee handling of all reports of cases and suspected cases, prohibiting disclosure of report information identifying an individual case or suspected cases except:

(a) To employees of the local health department, or other official agencies needing to know for the purpose of administering public health laws and these regulations;

(b) To health care providers, specific designees of health care facilities, laboratory directors, and others for the purpose of collecting additional information about a case or suspected case as required for disease prevention and control;

(2) Local health officers shall require and maintain signed confidentiality agreements with all health department employees with access to identifying information related to a case or suspected case of a person diagnosed with a notifiable condition. The agreements will be renewed at least annually and will include reference to criminal and civil penalties for

(2003 Ed.)

violation of chapters 70.02 and 70.24 RCW and other administrative actions that may be taken by the local health department.

(3) Local health departments may release statistical summaries and epidemiological studies based on individual case reports if no individual is identified or identifiable.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-515, filed 11/22/00, effective 12/23/00.]

WAC 246-101-520 Special conditions—AIDS and HIV. (1) The local health officer and local health department personnel shall maintain individual case reports for AIDS and HIV as confidential records consistent with the requirements of this section. The local health officer and local health department personnel shall:

(a) Use identifying information on HIV-infected individuals only:

(i) For purposes of contacting the HIV-positive individual to provide test results and post-test counseling; or

(ii) To contact persons who have experienced substantial exposure, including sex and injection equipment-sharing partners, and spouses; or

(iii) To link with other name-based public health disease registries when doing so will improve ability to provide needed care services and counseling and disease prevention.

(b) Destroy case report identifying information on asymptomatic HIV-infected individuals received as a result of this chapter within three months of receiving a complete case report.

(c) Destroy documentation of referral information established in WAC 246-100-072 and this subsection containing identities and identifying information on HIV-infected individuals and at-risk partners of those individuals immediately after notifying partners or within three months, whichever occurs first.

(d) Not disclose identifying information received as a result of this chapter unless:

(i) Explicitly and specifically required to do so by state or federal law; or

(ii) Authorized by written patient consent.

(2) Local health department personnel are authorized to use HIV identifying information obtained as a result of this chapter only for the following purposes:

(a) Notification of persons with substantial exposure, including sexual or syringe-sharing partners;

(b) Referral of the infected individual to social and health services; and

(c) Linkage to other public health data bases, provided that the identity or identifying information on the HIV-infected person is not disclosed outside of the health department.

(3) Public health data bases do not include health professions licensing records, certifications or registries, teacher certification lists, other employment rolls or registries, or data bases maintained by law enforcement officials.

(4) Local health officials will report asymptomatic HIV infection cases to the state health department according to a standard code developed by the state health department.

(5) Local health officers shall require and maintain signed confidentiality agreements with all health department

[Title 246 WAC—p. 147]

employees with access to HIV identifying information. These agreements will be renewed at least annually and include reference to criminal and civil penalties for violation of chapter 70.24 RCW and other administrative actions that may be taken by the department.

(6) Local health officers shall investigate potential breaches of the confidentiality of HIV identifying information by health department employees. All breaches of confidentiality shall be reported to the state health officer or their designee for review and appropriate action.

[Statutory Authority: RCW 43.20.050 and 70.24.125. 00-23-120, § 246-101-520, filed 11/22/00, effective 12/23/00.]

WAC 246-101-525 Special condition—Influenza.

Local health departments shall:

(1) Maintain a surveillance system for influenza during the appropriate season which may include:

(a) Monitoring of excess school absenteeism;

(b) Sample check with health care providers, clinics, nursing homes, and hospitals regarding influenza-like illnesses; and

(c) Monitoring of workplace absenteeism and other mechanisms.

(2) Encourage submission of appropriate clinical specimens from a sample of patients with influenza-like illness to the Washington state public health laboratories or other laboratory approved by the state health officer.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-525, filed 11/22/00, effective 12/23/00.]

WAC 246-101-601 Notifiable conditions and the department of health. This section describes the authorities and responsibilities of the department of health in collecting, analyzing, investigation and transmitting case information from notifiable conditions case reports.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-601, filed 11/22/00, effective 12/23/00.]

WAC 246-101-605 Duties of the department. The department shall:

(1) Provide consultation and technical assistance to local health departments and the department of labor and industries investigating notifiable conditions reports upon request.

(2) Provide consultation and technical assistance to health care providers, laboratories, health care facilities, and others required to make notifications to public health authorities of notifiable conditions upon request.

(3) Develop and distribute forms for the submission of notifiable conditions data to local health departments, health care providers, laboratories, health care facilities, and others required to make notifications to public health authorities of notifiable conditions.

(4) Maintain a twenty-four hour department telephone number for reporting notifiable conditions.

(5) Develop routine data dissemination mechanisms that describe and analyze notifiable conditions case investigations and data. These may include annual and monthly reports and other mechanisms for data dissemination as developed by the department.

[Title 246 WAC—p. 148]

(6) Conduct investigations and institute control measures consistent with those indicated in the seventeenth edition, 2000 of *Control of Communicable Diseases Manual*, edited by James Chin, published by the American Public Health Association (copy is available for review at the department and at each local health department), except:

(a) When superseded by more up-to-date measures; or

(b) When other measures are more specifically related to Washington state.

(7) Document the known environmental, human, and or other variables associated with a case or suspected case of pesticide poisoning.

(8) Report the results of the pesticide investigation to the principal health care provider named in the case report form and to the local health officer in whose jurisdiction the exposure has occurred.

(9) The department may negotiate alternate arrangements for meeting reporting requirements under this chapter through cooperative agreement between the department and any health care provider, laboratory, or health care facility.

(10) The department may consolidate reporting for notifiable conditions from any health care provider, laboratory, or health care facility, and relieve that health care provider, laboratory, or health care facility from reporting directly to each local health department, if the department can provide the report to the local health department within the same time as the local health department would have otherwise received it.

[Statutory Authority: RCW 43.20.050, 43.70.545 and 70.104.030. 00-23-120, § 246-101-605, filed 11/22/00, effective 12/23/00.]

WAC 246-101-610 Handling of case reports and medical information. (1) The state health officer or designee shall establish and maintain confidentiality procedures related to employee handling of all reports of cases and suspected cases, prohibiting disclosure of report information identifying an individual case or suspected cases except:

(a) To employees of the local health department, or other official agencies needing to know for the purpose of administering public health laws and these regulations.

(b) To health care providers, specific designees of health care facilities, laboratory directors, and others for the purpose of collecting additional information about a case or suspected case as required for disease prevention and control.

(2) The department shall require and maintain signed confidentiality agreements with all department employees, contractors, and others with access to identifying information related to a case or suspected case of a person diagnosed with a notifiable condition. These agreements will be renewed at least annually and include reference to criminal and civil penalties for violation of chapters 70.02 and 70.24 RCW and other administrative actions that may be taken by the department.

[Statutory Authority: RCW 43.20.050, 43.70.545 and 70.104.030. 00-23-120, § 246-101-610, filed 11/22/00, effective 12/23/00.]

WAC 246-101-615 Requirements for data dissemination. The department shall:

(2003 Ed.)

(1) Distribute periodic epidemiological summary reports and an annual review of public health issues to local health officers and local health departments.

(2) Make available any data or other documentation in its possession for notifiable conditions reported directly to the department to local health officers or their designees upon execution of a data sharing agreement within two days of request.

(3) Periodically distribute statistical summaries and epidemiological studies based on individual case reports if no individual is identified or identifiable.

[Statutory Authority: RCW 43.20.050, 43.70.545 and 70.104.030. 00-23-120, § 246-101-615, filed 11/22/00, effective 12/23/00.]

WAC 246-101-620 Requirements for notification to the department of labor and industries. The department shall:

(1) Make notifiable conditions reports where the department of labor and industries has a lead role in conducting the case investigation available within twenty-four hours of receipt by the department.

(2) Make other data necessary to conduct case investigations or epidemiological summaries available within two days of a request from the department of labor and industries.

(3) Execute a data sharing agreement with the department of labor and industries prior to implementation of this chapter.

[Statutory Authority: RCW 43.20.050, 43.70.545, 70.24.125, 70.28.010 and 70.104.030. 00-23-120, § 246-101-620, filed 11/22/00, effective 12/23/00.]

WAC 246-101-625 Content of notifications to the department of labor and industries. Unless otherwise prohibited by law, the department shall make available any data in its possession in sharing data as described in WAC 246-101-615, 246-101-620, and 246-101-625.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-625, filed 11/22/00, effective 12/23/00.]

WAC 246-101-630 Special condition—Antibiotic resistant disease. The department shall:

(1) Maintain a surveillance system for monitoring antibiotic resistant disease that may include:

(a) Development of a sentinel network of laboratories to provide information regarding antibiotic resistant disease; and

(b) Sample checks with health care providers, clinics, and hospitals regarding antibiotic resistant disease.

(2) Encourage submission of appropriate clinical specimens from a sample of patients with antibiotic resistant disease to the Washington state public health laboratories or other laboratory approved by the state health officer.

[Statutory Authority: RCW 43.20.050, 43.70.545 and 70.24.125. 00-23-120, § 246-101-630, filed 11/22/00, effective 12/23/00.]

WAC 246-101-635 Special conditions—AIDS and HIV. The following provisions apply for the use of AIDS and HIV notifiable conditions case reports and data:

(1) Department personnel shall not disclose identifying information received as a result of receiving information

regarding a notifiable conditions report of a case of AIDS or HIV unless:

(a) Explicitly and specifically required to do so by state or federal law; or

(b) Authorized by written patient consent.

(2) Department personnel are authorized to use HIV identifying information received as a result of receiving information regarding a notifiable conditions report of a case of AIDS or HIV only for the following purposes:

(a) Notification of persons with substantial exposure, including sexual or syringe-sharing partners;

(b) Referral of the infected individual to social and health services; and

(c) Linkage to other public health data bases, provided that the identity or identifying information on the HIV-infected person is not disclosed outside of the health department.

(3) For the purposes of this chapter, public health data bases do not include health professions licensing records, certifications or registries, teacher certification lists, other employment rolls or registries, or data bases maintained by law enforcement officials.

(4) The state health officer shall require and maintain signed confidentiality agreements with all department employees with access to HIV identifying information. These agreements will be renewed at least annually and include reference to criminal and civil penalties for violation of chapter 70.24 RCW and other administrative actions that may be taken by the department.

(5) The state health officer shall investigate potential breaches of the confidentiality of HIV identifying information by department employees. All breaches of confidentiality shall be reported to the state health officer or their authorized representative for review and appropriate action.

(6) When providing technical assistance to a local health department, authorized representatives of the department may temporarily and subject to the time limitations in WAC 246-101-525(2) receive the names of reportable cases of asymptomatic HIV infection for the purpose of HIV surveillance, partner notification, or special studies. Upon completion of the activities by representatives of the state health department, named information will be:

(a) Provided to the local health department subject to the provisions of WAC 246-101-525(2); and

(b) Converted to code and maintained as code only until the person is diagnosed with AIDS.

(7) Within twelve months of the effective date of the HIV infection notification system (by September 1, 2000), established in this chapter, the state health officer, in cooperation with local health officers, will report to the board on:

(a) The ability of the reporting system to meet surveillance performance standards established by the federal Centers for Disease Control and Prevention;

(b) The cost of the reporting system for state and local health departments;

(c) The reporting system's effect on disease control activities; and

(d) The impact of HIV reporting on HIV testing among persons at increased risk of HIV infection.

[Statutory Authority: RCW 43.20.050, 70.24.125 and 70.28.010. 00-23-120, § 246-101-635, filed 11/22/00, effective 12/23/00.]

WAC 246-101-640 Special condition—Birth defects.

The department shall enter into a data sharing agreement with the office of the superintendent of public instruction to access data from data bases maintained by the superintendent containing student health information for the purpose of identifying cases of autism or other conditions of public health interest.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-640, filed 11/22/00, effective 12/23/00.]

WAC 246-101-701 Notifiable conditions and the department of labor and industries. This section describes the authorities and responsibilities of the department of labor and industries in collecting, analyzing, investigating and transmitting case information from notifiable conditions case reports.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-701, filed 11/22/00, effective 12/23/00.]

WAC 246-101-705 Duties of the department of labor and industries. (1) The department of labor and industries shall:

(a) Provide consultation and technical assistance to local health departments and the department investigating notifiable conditions reports;

(b) Provide consultation and technical assistance to health care providers, laboratories, health care facilities, and others required to make notifications to public health authorities of notifiable conditions upon request;

(c) Provide technical assistance to businesses and labor organizations for understanding the use of notifiable conditions data collected and analyzed by the department of labor and industries; and

(d) Develop routine data dissemination mechanisms that describe and analyze notifiable conditions case investigations and data. These may include annual and monthly reports and other mechanisms for data dissemination as developed by the department of labor and industries.

(2) The department of labor and industries may receive data through any cooperative relationship negotiated by the department of labor and industries and any health care provider, laboratory, or health care facility.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-705, filed 11/22/00, effective 12/23/00.]

WAC 246-101-710 Handling of case reports and medical information. (1) The department of labor and industries shall establish and maintain confidentiality procedures related to employee handling of all reports of cases and suspected cases, prohibiting disclosure of report information identifying an individual case or suspected cases except:

(a) To employees of the local health department, the department, or other official agencies needing to know for the purpose of administering public health laws and these regulations; and

(b) To health care providers, specific designees of health care facilities, laboratory directors, and others for the purpose

[Title 246 WAC—p. 150]

of collecting additional information about a case or suspected case as required for occupational condition prevention and control.

(2) The department of labor and industries shall require and maintain signed confidentiality agreements with all employees, contractors, and others with access to identifying information related to a case or suspected case of a person diagnosed with a notifiable condition. Such agreements will be renewed at least annually and include reference to criminal and civil penalties for violation of chapter 70.02 RCW, other chapters of pertinent state law, and other administrative actions that may be taken by the department of labor and industries.

(3) The department of labor and industries may release statistical summaries and epidemiological studies based on individual case reports if no individual is identified or identifiable.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-710, filed 11/22/00, effective 12/23/00.]

WAC 246-101-715 Requirements for data dissemination. The department of labor and industries shall:

(1) Distribute periodic epidemiological summary reports and an annual review of public health issues to local health officers and local health departments.

(2) Make available case investigation documentation for notifiable conditions reported directly to the department to local health officers or their designees upon execution of a data sharing agreement.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-715, filed 11/22/00, effective 12/23/00.]

WAC 246-101-720 Requirements for notification to local health departments. The department of labor and industries shall make data and other pertinent information described in WAC 246-101-715 available to local health departments within two days of a request.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-720, filed 11/22/00, effective 12/23/00.]

WAC 246-101-725 Requirements for notification to the department of health. The department of labor and industries shall:

(1) Make other data necessary to conduct case investigations or epidemiological summaries available within two days of a request from the department.

(2) Execute a data sharing agreement with the department prior to implementation of this chapter.

[Statutory Authority: RCW 43.20.050. 00-23-120, § 246-101-725, filed 11/22/00, effective 12/23/00.]

WAC 246-101-730 Special condition—Hospitalized burns. The department of labor and industries shall maintain a surveillance system for monitoring hospitalized burns that may include:

(1) Development of a sentinel network of burn treatment centers and hospitals to provide information regarding hospitalized burns; and

(2003 Ed.)

(2) Sample checks with health care providers, clinics, and hospitals regarding hospitalized burns.

[Statutory Authority: RCW 43.20.050, 00-23-120, § 246-101-730, filed 11/22/00, effective 12/23/00.]

Chapter 246-102 WAC CANCER REGISTRY

WAC

246-102-001	Purpose.
246-102-010	Definitions.
246-102-020	Who must report.
246-102-030	Cancer case identification.
246-102-040	Data collection requirements.
246-102-050	Form, frequency, and format for reporting.
246-102-060	Data quality assurance.
246-102-070	Access and release of information.

WAC 246-102-001 Purpose. The purpose of cancer case reporting is to monitor the incidence of cancer in the state. Information collected through the cancer registry system is used by medical, research and public health professionals to understand, control and reduce occurrences of cancer in residents of Washington. This chapter establishes the criteria and procedures for identifying and reporting cancer cases and defines the standards for access and release of cancer information.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130, 01-04-086, § 246-102-001, filed 2/7/01, effective 3/10/01.]

WAC 246-102-010 Definitions. For the purposes of RCW 70.54.230, 70.54.240, 70.54.250, 70.54.260, 70.54.-270, and this chapter, the following words and phrases shall have the following meaning unless the context clearly indicates otherwise:

(1) "Cancer case" means:

(a) Any malignant neoplasm with the exception of basal and squamous cell carcinoma of the skin;

(b) All brain tumors;

(c) Basal and squamous cell carcinoma of the external genital organ sites (vulva, labia, clitoris, prepuce, penis, scrotum);

(d) Cancer in situ, except carcinoma in situ of the uterine cervix; or

(e) Other diagnoses necessary to meet the reporting requirements of the Center for Disease Control's National Program of Cancer Registries, the National Cancer Institute's Surveillance Epidemiology and End Results Program, the Commission on Cancer, and the North American Association of Central Cancer Registries (a copy is available for review at the department).

(2) "Cancer diagnosis or treatment facilities" means hospitals, surgical centers, outpatient radiation therapy centers, doctors' offices, independent clinical laboratories and any other facilities where cancer cases are diagnosed or treated.

(3) "Confidential information" means any information which could lead to the identification of cancer patients, cancer diagnosis or treatment facilities, independent clinical laboratories, or attending health care providers.

(4) "Contractors" means agencies designated by contract with the department of health to perform activities related to identification, collection, and processing of cancer data.

(5) "Department" means the Washington state department of health.

(6) "Designees" means hospital-based cancer registries and other persons or entities designated by the department to perform data collection activities.

(7) "Hospital-based cancer registry" means a cancer registry which is maintained by a hospital or other health care facility.

(8) "In situ" means tumors described as "in situ" by the pathologist reading the diagnostic report(s).

(9) "Institutional review board" means any board, committee, or other group formally designated by an institution, or authorized under federal or state law, to review, approve the initiation of, or conduct periodic review of research programs to assure the protection of the rights and welfare of human research subjects as defined in RCW 70.02.010.

(10) "Patient" means a case, suspected case or contact.

(11) "Principal health care provider" means the attending health care provider recognized as primarily responsible for diagnosis and treatment of a patient, or in the absence of such, the health care provider initiating diagnostic testing or treatment for the patient.

(12) "Reportable cancer case" means any cancer case diagnosed in a Washington state resident after the effective date of these rules.

(13) "Resident" means an individual residing in Washington state at the time of cancer diagnosis.

(14) "Stage of disease" means a cancer classification system encompassing attributes of a tumor as determined and described by:

(a) *Summary Staging Guide, Surveillance Epidemiology and End Results (SEER), Program, April 1977*; except when superseded by more up-to-date measures (a copy is available for review at the department); and

(b) *Manual for Staging of Cancer, 5th Edition, American Joint Committee on Cancer, (AJCC), 1998*, except when superseded by more up-to-date measures (a copy is available for review at the department).

(15) "State cancer registry" means the statewide cancer data base maintained by the department of health.

(16) "State cancer registry contract" means the legal agreement by which contractors are authorized to obtain information on reportable cancer cases. It also means the document specifying the contractors' obligations to the state cancer registry with respect to how and when information is collected, processed, and provided and how quality assurance standards are met.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130, 01-04-086, § 246-102-010, filed 2/7/01, effective 3/10/01.]

WAC 246-102-020 Who must report. By statute (RCW 70.54.240), the responsibility for identifying and reporting cases of cancer rests with health care facilities, independent clinical laboratories, and other principal health care providers. The department may, at its discretion, delegate some or all of these responsibilities to contractors or other designees. A list of the contractors and designees responsible for identifying and reporting cases of cancer diagnosed at specific sites in Washington is available for review at the department.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130. 01-04-086, § 246-102-020, filed 2/7/01, effective 3/10/01.]

WAC 246-102-030 Cancer case identification. (1) Contractors or designees shall identify reportable cancer cases diagnosed and treated at cancer diagnosis and treatment facilities.

(2) Cancer diagnosis or treatment facilities shall:

(a) Organize case finding documents by procedure or service date to permit identification of cancer cases; and

(b) Submit or make available, case finding documents including the following if maintained:

(i) Disease and operation indices for cancer cases;

(ii) Pathology and cytology reports;

(iii) New patient radiation logs;

(iv) New patient chemotherapy logs; and

(v) Other alternative case finding documents that are necessary to identify or verify reportable cancer cases;

(c) Cancer diagnosis or treatment facilities shall submit case finding documents by paper form, computer disk, or electronic file or make batched hard copy documents available for on-site review, within forty-five days of the date of service.

(3) On request, principal health care providers shall identify to contractors, designees, or the department reportable cancer cases diagnosed at facilities other than hospitals, surgical centers, and outpatient radiation therapy centers (as specified under WAC 246-102-030 and 246-102-040) unless the patient was hospitalized for additional cancer diagnosis or treatment services within one month of diagnosis.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130. 01-04-086, § 246-102-030, filed 2/7/01, effective 3/10/01.]

WAC 246-102-040 Data collection requirements. (1) Contractors or designees shall complete cancer abstracts for patients identified through cancer diagnosis and treatment facilities.

(2) Cancer diagnosis or treatment facilities shall provide contractors or their designees with access to pathology and cytology reports and all medical records pertaining to identified cancer cases.

(3) On request by the contractor, designee or the department, principal health care providers or their staff shall be responsible for completing cancer abstracts for patients diagnosed at facilities other than hospitals, surgical centers, and outpatient radiation therapy centers, unless the patient was hospitalized for additional cancer diagnosis or treatment services within one month of diagnosis.

(4) The following information items shall be included in cancer abstracts, providing the information is available from the patient's medical records:

(a) Patient information:

(i) Name;

(ii) Address at time of diagnosis;

(iii) Sex;

(iv) Race;

(v) Hispanic origin;

(vi) Birthdate;

(vii) Age at time of diagnosis;

(viii) Social Security number;

(ix) State or country of birth;

(x) Usual occupation;

(b) Diagnostic information:

(i) Date first seen for this cancer;

(ii) Primary site or sites;

(iii) Histologic type or types, behavior and grade;

(iv) Date of each diagnosis;

(v) Method or methods of diagnostic confirmation;

(vi) Stage of disease at diagnosis using:

(A) Summary stage; and

(B) AJCC system if maintained by the cancer diagnostic or treatment facility;

(vii) Sequence;

(viii) Laterality;

(c) First course of treatment information:

(i) Date of initial treatment;

(ii) All treatment modalities given as part of first course of therapy;

(d) Other information:

(i) Name and address of cancer diagnosis or treatment facility providing information;

(ii) Medical record number;

(iii) Name and address of principal health care provider; and

(iv) Other items necessary to meet the reporting requirements of the Center for Disease Control's National Program of Cancer Registries, the National Cancer Institute's Surveillance Epidemiology and End Results Program, the Commission on Cancer, and the North American Association of Central Cancer Registries (a copy is available at the department).

(5) The department may require submission of additional information from contractors or designees as needed to assess data reliability and validity.

(6) Contractors shall prepare detailed data collection protocols for inclusion in the state cancer registry contract.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130. 01-04-086, § 246-102-040, filed 2/7/01, effective 3/10/01.]

WAC 246-102-050 Form, frequency, and format for reporting. (1) Contractors or designees shall:

(a) Prepare electronic data files containing information from cancer abstracts in a format specified by the department; and

(b) Provide electronic files to the state cancer registry at intervals specified by written agreement with the department.

(2) On request by the contractor, designee or the department, principal health care providers shall complete and submit cancer abstracts to contractors, designees, or the department under WAC 246-102-020 and 246-102-030 within sixty days following a patient's cancer diagnosis date if the patient was not hospitalized for a cancer-related diagnosis or treatment within one month of diagnosis.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130. 01-04-086, § 246-102-050, filed 2/7/01, effective 3/10/01.]

WAC 246-102-060 Data quality assurance. (1) Contractors or designees shall:

(a) Assess the completeness and accuracy of case identification and data collection through computerized edit pro-

grams and on-site audits, or make available information and documentation for this purpose; and

(b) Maintain a system for retrieval of completed cancer abstracts for a period up to ten years.

(2) Cancer diagnosis or treatment facilities shall:

(a) Make available to the contractor, designee or the department, all case finding source documents and medical records for data quality assurance activities.

(b) Maintain a system for retrieval of case finding source documents and medical records for a period up to ten years.

(3) The department may require contractors or designees to make available all findings from data quality assurance activities for review and verification.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130. 01-04-086, § 246-102-060, filed 2/7/01, effective 3/10/01.]

WAC 246-102-070 Access and release of information. (1) Cancer registry information shall be used only for statistical, scientific, medical research and public health purposes. Contractors and designees must comply with chapter 70.02 RCW regarding the disclosure of patient health care information.

(2) The department may release confidential registry information for research purposes after the research project has been reviewed and approved by an institutional review board and a confidentiality agreement is negotiated (a copy of the institutional review board procedures and application are available from the department).

(3) The department may release confidential registry information for projects to assess threats to public health or improve public health practice after the project has been reviewed and approved by the department and a data-sharing agreement is negotiated (a copy of the procedures for data-sharing agreements is available from the department).

(4) Cancer diagnosis or treatment facilities may require contractors or designees to sign an agreement of confidentiality regarding access and release of cancer data and prepare, administer, and maintain confidentiality oaths as needed.

(5) Cancer diagnosis or treatment facilities shall adhere to recommendations in RCW 70.54.260 regarding content of confidentiality agreement if confidentiality agreements are used.

(6) Cancer diagnosis and treatment centers shall make available to cancer patients printed information which describes the purpose of the state cancer registry, the statutory requirements which apply to health care facilities, independent clinical laboratories, and other principal health care providers to identify and report cases of cancer to the state cancer registry, and to protect the confidential information that is reported, the public health and research uses of information in the state cancer registry, the circumstances under which cancer registry information is disclosed for these purposes and the relevant RCW and WAC pertaining to the state cancer registry.

[Statutory Authority: RCW 70.54.270, 43.20.050, 43.70.130. 01-04-086, § 246-102-070, filed 2/7/01, effective 3/10/01.]

(2003 Ed.)

Chapter 246-110 WAC

CONTAGIOUS DISEASE—SCHOOL DISTRICTS AND DAY CARE CENTERS

WAC

246-110-001	Purpose.
246-110-010	Definition.
246-110-020	Control of communicable (contagious) disease.

WAC 246-110-001 Purpose. The following regulations are adopted by the board of health for the purpose of governing the presence on or about any school or day care center premises of susceptible persons who have, or have been exposed to, a communicable disease. These regulations are in addition to other requirements imposed by chapter 246-100 WAC.

In furtherance of the purpose and intent of the law and these regulations, it is recommended that parents of students whose medical supervision seems inadequate should be encouraged to obtain the services of a physician for the child. When the economic situation warrants, the parents should be guided to the appropriate source of community-sponsored medical care. These regulations are not intended to imply that any diagnosis or treatment will be performed by school or day care center personnel.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-110-001, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-110-001, filed 12/27/90, effective 1/31/91; 90-21-056 (Order 095), § 248-101-011, filed 10/15/90, effective 10/15/90.]

WAC 246-110-010 Definition. As used in this portion of these regulations, these terms shall mean:

(1) "Contact" means a person exposed to an infected person, animal, or contaminated environment which might provide an opportunity to acquire the infection.

(2) "Exposure" means such association with a person or animal in the infectious stage of a disease, or with a contaminated environment, as to provide the opportunity to acquire the infection.

(3) "Susceptible" means a person who does not possess sufficient resistance, whether natural or induced, to a pathogenic agent or disease to prevent contracting that disease when exposed thereto.

(4) "Communicable disease (contagious disease)" means an illness caused by an infectious agent which can be transmitted from one person, animal, or object to another person by direct or indirect means including transmission via an intermediate host or vector, food, water, or air. Communicable (contagious) diseases include, but are not limited to:

- (a) Chickenpox
- (b) Conjunctivitis (bacterial)
- (c) Diphtheria
- (d) Giardiasis
- (e) Hepatitis A
- (f) Invasive Haemophilus influenza disease (excluding otitis media)
- (g) Measles
- (h) Meningitis (bacterial)
- (i) Mumps
- (j) Pediculosis
- (k) Pertussis
- (l) Rubella

(m) Salmonellosis

(n) Shigellosis

(o) Tuberculosis

(5) "School" means each building, facility, and location at or within which any or all portions of a preschool, kindergarten and grades one through twelve program of education and related activities are conducted for two or more children by or in behalf of any public school district and by or in behalf of any private school or private institution subject to approval by the state board of education.

(6) "Day care center" means an agency which regularly provides care for a group of children for periods of less than twenty-four hours and is licensed pursuant to chapter 74.15 RCW.

(7) "Outbreak" means the occurrence of cases of a disease or condition in any area over a given period of time in excess of the expected number of cases.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-110-010, filed 12/27/90, effective 1/31/91; 90-21-056 (Order 095), § 248-101-021, filed 10/15/90, effective 10/15/90.]

WAC 246-110-020 Control of communicable (contagious) disease. (1) When there is an outbreak of a contagious disease, as defined in WAC 246-110-010, such that there is the potential for a case or cases within a school or day care center, the local health officer, if appropriate, after consultation with the secretary of health or designee shall take all medically appropriate actions deemed to be necessary to control or eliminate the spread of the disease, including, but not limited to:

(a) Closing the affected school(s) or day care center(s), or part(s) thereof;

(b) Closing other schools or day care centers in the local health officer's jurisdiction;

(c) Causing the cessation of selected school or day care center activities or functions;

(d) Excluding from schools or day care centers in the local health officer's jurisdiction any students, staff, and volunteers who are infected with, or deemed to be susceptible to, the disease.

(2) Prior to taking action the health officer shall:

(a) Consult with and discuss the ramifications of action with the superintendent of the school district, or the chief administrator of the day care center or their designees on the proposed action; and

(b) Provide the board of directors and the superintendent of the school district or the chief administrator of the day care center a written decision in the form and substance of an order directing them to take action;

(3) Where these actions have been taken, the local health officer shall, in addition:

(a) Set the terms and conditions permitting schools or day care centers to reopen; activities and functions to resume; and excluded students, staff and volunteers to be readmitted; and

(b) Pursue, in consultation with the secretary of health or designee and school and/or day care officials, the investigation of the source of disease, or order those actions necessary to the ultimate control of the disease.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-110-020, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-110-020, filed 12/27/90, effective 1/31/91; 90-21-056 (Order 095), § 248-101-221, filed 10/15/90, effective 10/15/90.]

Chapter 246-130 WAC

HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION INTERVENTIONS

WAC

246-130-001	What is the HIV early intervention program?
246-130-010	What definitions do we use?
246-130-020	What early intervention program services are available?
246-130-028	What services are not available?
246-130-030	How do we pay providers?
246-130-040	How do persons with HIV become eligible?
246-130-060	What information is required for client eligibility, and will it be kept confidential?
246-130-080	What do clients do if they disagree with the department's decision about their eligibility or coverage?
246-130-090	How do I contact the department?

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-130-050	Transfer of resources without adequate consideration. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-050, filed 8/17/90, effective 9/17/90. Statutory Authority: RCW 43.20A.550. 87-22-012 (Order 2549), § 248-168-050, filed 10/26/87.] Repealed by 95-23-018, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.040 and 43.70.120.
246-130-070	Participation. [Statutory Authority: RCW 43.70.040 and 43.70.120. 95-23-018, § 246-130-070, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-070, filed 8/17/90, effective 9/17/90.] Repealed by 00-19-117, filed 9/20/00, effective 10/21/00. Statutory Authority: RCW 43.70.040. and 43.70.120.

WAC 246-130-001 What is the HIV early intervention program? The early intervention program provides treatment of HIV infection to eligible clients based on available funds. The department provides these early intervention services to improve the public health by treating people living with HIV, its complications, and side effects of HIV treatment, and in order to decrease the risk of clients with HIV infecting others. Information on how to contact this program is in WAC 246-130-090.

[Statutory Authority: RCW 43.70.040 and 43.70.120. 00-19-117, § 246-130-001, filed 9/20/00, effective 10/21/00; 95-23-018, § 246-130-001, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-010, filed 8/17/90, effective 9/17/90. Statutory Authority: RCW 43.20A.550. 87-22-012 (Order 2549), § 248-168-010, filed 10/26/87.]

WAC 246-130-010 What definitions do we use? The following words and phrases have the following meaning in chapter 246-130 WAC:

(1) "**AIDS**" means acquired immunodeficiency syndrome.

(2) "**Applicant**" means a person applying for early intervention program services.

(3) **"Client"** means a person determined to be currently eligible by the department for early intervention program services.

(4) **"Department"** means the Washington state department of health.

(5) **"Early intervention program services"** means medically necessary treatment and services that reduce the rate of progression of HIV infection and HIV transmission. This includes behavioral risk reduction interventions. See WAC 246-130-020 for details.

(6) **"Federal poverty level"** means the official income level for poverty released by the federal government each year in February.

(7) **"Formulary"** means the list of prescription drugs that the early intervention program will pay for. To obtain a copy of that list, see WAC 246-130-090.

(8) **"HIV"** means human immunodeficiency virus.

(9) **"Medical assistance administration (MAA)"** means the part of the department of social and health services responsible for operating the state's Medicaid and related medical programs.

(10) **"Provider"** means a health care professional contracted by the department to supply pharmaceutical, medical, dental, or laboratory services to a client.

(11) **"Schedule of services"** means the department's list of medical, dental, and laboratory services covered by its early intervention program. To obtain a copy of that list, see WAC 246-130-090.

(12) **"Standard of care"** means treatment for HIV commonly accepted by the local medical community.

(13) **"Steering committee"** means the department's HIV early intervention steering committee. This advisory committee serves at the pleasure of the DOH secretary per RCW 43.70.040(2), consists of Washington state residents living with HIV and HIV medical experts and community organizations, and advises the department on its early intervention program. Its bylaws are available from the department per WAC 246-130-090.

[Statutory Authority: RCW 43.70.040 and 43.70.120. 00-19-117, § 246-130-010, filed 9/20/00, effective 10/21/00; 95-23-018, § 246-130-010, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.120. 92-02-018 (Order 224), § 246-130-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-015, filed 8/17/90, effective 9/17/90.]

WAC 246-130-020 What early intervention program services are available? Services to treat HIV are available from the department, based on available funding, to eligible clients as described in this section.

(1) The department decides what specific medical, laboratory, dental, and prescription medication services to cover after actively consulting with its steering committee and considering:

(a) Support of the steering committee, which represents clients and local medical HIV/AIDS communities;

(b) FDA approval (for prescription medications);

(c) Recognition by the medical community as a standard of care;

(2003 Ed.)

(d) Effectiveness in treatment for HIV, complications of HIV, side effects of current treatments for HIV or support for HIV treatment adherence; and

(e) Relative cost of services.

(2) The early intervention program services described in this section are available to all clients, unless they receive those services from other sources. Specific services of this section are available for a client only when medically necessary to treat HIV and associated diseases, complications of treating HIV, or support for HIV treatment adherence.

(3) Specific covered medical, laboratory, and dental services are listed in the department's "schedule of services."

(4) Prescription drugs covered are listed in the department's "early intervention drug formulary."

(5) Covered health insurance includes:

(a) Premium payment, including COBRA premiums;

(b) Deductible payment up to five hundred dollars per twelve-month period; and

(c) Co-pay payment for third-party insurance, except basic health plan, as follows:

(i) The percentage of prescription medication costs covered by the department and not covered by third-party insurers; and

(ii) Fixed dollar co-pay required by a client's third-party insurance plan.

(d) For basic health plan enrollees, the department pays the percentage of prescription medication expenses not covered by the basic health plan but covered by the department's early intervention program formulary.

(6) The department may also coordinate other services to treat HIV and AIDS. These are available as funding and contracting permit. For example, as of July 1, 2000, the department may pay the spend-down for MAA medically needy (MN) clients who are also DOH clients, up to one thousand one hundred dollars per month.

(7) You may contact the department per WAC 246-130-090 to make comments on service coverage or to receive information.

[Statutory Authority: RCW 43.70.040 and 43.70.120. 00-19-117, § 246-130-020, filed 9/20/00, effective 10/21/00; 95-23-018, § 246-130-020, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-020, filed 8/17/90, effective 9/17/90. Statutory Authority: RCW 43.20A.550. 87-22-012 (Order 2549), § 248-168-020, filed 10/26/87.]

WAC 246-130-028 What services are not available?

The department does not cover any services which are:

(1) Not specified or referenced in WAC 246-130-020; or

(2) Not funded as specified in WAC 246-130-030(3).

[Statutory Authority: RCW 43.70.040. and RCW 43.70.120. 00-19-117, § 246-130-028, filed 9/20/00, effective 10/21/00.]

WAC 246-130-030 How do we pay providers? The department pays providers for covered services delivered to clients, as limited by this section.

(1) The department pays providers who contract with the department for services described in WAC 246-130-020.

(a) The department will only pay for services delivered by a contracted provider.

(b) Services must be billed within one hundred eighty days of being provided.

(2) The department only pays for covered, medically necessary early intervention program services delivered to clients who are eligible under WAC 246-130-040.

(3) Payment of services depends on availability of federal and state funds. The department will not deny payment of any individual claim for funding availability unless the department denies an entire class of claims, or an entire program.

(a) Providers and clients will receive written notice of any limitation or reduction in coverage or payment that results from loss of federal or state funding at least thirty days in advance.

(b) If the department denies or reduces payment for any class of claims or program, it must only show that it made a good faith effort to mail written notice to all providers and clients.

(4) Providers who dispute a payment may do so through the contracts process. See WAC 246-130-080(3).

(5) Providers must bill the department per terms of the contract between the provider and department.

(6) The department is payer of last resort.

(a) Providers must bill all other third-party sources prior to billing the department for covered services, and

(b) Providers must reimburse the department for any funds paid by the department, which are payable by other sources.

[Statutory Authority: RCW 43.70.040 and 43.70.120. 00-19-117, § 246-130-030, filed 9/20/00, effective 10/21/00; 95-23-018, § 246-130-030, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.120. 92-02-018 (Order 224), § 246-130-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-030, filed 8/17/90, effective 9/17/90. Statutory Authority: RCW 43.20A.550. 87-22-012 (Order 2549), § 248-168-030, filed 10/26/87.]

WAC 246-130-040 How do persons with HIV become eligible? (1) The department determines client eligibility for its early intervention program per this section. Beginning the month that the applicant's completed application was post-marked, an applicant is eligible for twelve months of early intervention program services when:

(a) The applicant has a medical diagnosis of HIV (the department may require a doctor's diagnosis);

(b) The applicant has a Washington state address and intends to stay in Washington state;

(c) The applicant or his/her designated representative has submitted truthful information on the department's application form to the department;

(d) The applicant has monthly income, averaged over twelve months, equal to or less than the limit set by DOH in consultation with the early intervention program steering committee. For example: In 2000, that limit was three hundred seventy percent of Federal Poverty Level for one person (\$2,575) per month. The department shall announce and seek public comment on proposed changes to the income limit. Income includes:

(i) Wages, salary, overtime, tips, and bonuses;

(ii) Social Security, trust funds for disability, or other disability insurance payments;

(iii) Unemployment benefits;

(iv) Veteran's Administration benefits;

(v) Lump sum payments of gifts, cash inheritance, property, lottery winnings, worker's compensation for lost income, or severance pay;

(vi) Private pensions, annuities, or royalties; and

(vii) Investment dividends.

(e) The applicant has current resources of less than ten thousand dollars. Resources include trust funds, and any other financial resources available to the applicant. The department does not count the following as resources:

(i) One home, defined as real property owned by the client as his or her principal place of residence in Washington state, together with surrounding property not to exceed five acres;

(ii) Commercial property, or property used for producing income, up to the first twenty thousand dollars of value;

(iii) Household furnishings;

(iv) One automobile; or

(v) Pensions and other Internal Revenue Service designated retirement accounts;

(f) The applicant is not currently eligible for or cannot access medical benefits from the department of social and health services; and

(g) The applicant is not currently an inmate of any correctional institute or jail or will not be when their application is approved.

(2) Periods of eligibility caused by false information may cause the department to:

(a) Disenroll a client from the department's early intervention program; and

(b) Recover funds paid by the department during periods of false eligibility.

[Statutory Authority: RCW 43.70.040 and 43.70.120. 00-19-117, § 246-130-040, filed 9/20/00, effective 10/21/00; 95-23-018, § 246-130-040, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.120. 92-02-018 (Order 224), § 246-130-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-040, filed 8/17/90, effective 9/17/90. Statutory Authority: RCW 43.20A.550. 87-22-012 (Order 2549), § 248-168-040, filed 10/26/87.]

WAC 246-130-060 What information is required for client eligibility, and will it be kept confidential? An applicant seeking early intervention program services must apply to the department.

(1) Applicant and client information supplied to the department is confidential.

(2) Applicants must provide medical and financial information at the department's request, including:

(a) Sources and amounts of all income and resources;

(b) Evidence that all resources or entitlements available to an applicant were accessed before that applicant applied for or received early intervention program services; and

(c) Other medical or financial information.

(3) Clients must notify the department of medical or financial changes that affect their eligibility within twenty days of the change. Clients who do not notify the department

of medical or financial changes must pay back to the department funds provided during the period of ineligibility caused by those changes.

[Statutory Authority: RCW 43.70.040 and 43.70.120. 00-19-117, § 246-130-060, filed 9/20/00, effective 10/21/00; 95-23-018, § 246-130-060, filed 11/7/95, effective 12/8/95. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-130-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.70.120. 90-17-087 (Order 071), § 248-168-060, filed 8/17/90, effective 9/17/90. Statutory Authority: RCW 43.20A.550. 87-22-012 (Order 2549), § 248-168-060, filed 10/26/87.]

WAC 246-130-080 What do clients do if they disagree with the department's decision about their eligibility or coverage? Applicants and clients may appeal any decision by the department about their early intervention program eligibility or coverage.

(1) Chapter 246-10 WAC details the adjudicated proceeding for matters involving receipt of benefits. The department will provide information on the cause for denied benefits, how a proceeding may be requested, the forms necessary to request a proceeding and information on required time frames.

(2) Applicants and clients may not appeal the department's denial or limitations when the department closes or limits an early intervention program service due to funding availability. See WAC 246-130-030(3) for more details.

(3) Rate and payment disputes between providers and the department are handled by contract.

(4) Clients of any other public agency must use that agency's process to resolve eligibility or other disputes regarding that agency. MAA's fair hearings process is described in chapter 388-08 WAC.

[Statutory Authority: RCW 43.70.040. and RCW 43.70.120. 00-19-117, § 246-130-080, filed 9/20/00, effective 10/21/00.]

WAC 246-130-090 How do I contact the department? For information or application, contact:

Department of Health
 Client Services
 P.O. Box 47841
 Olympia, WA 98504-7841
 Telephone 1-800-272-2437 Option 2

Or, visit the WEB site at www.doh.wa.gov. Clicking on "HIV Information" accesses information about the early intervention program.

[Statutory Authority: RCW 43.70.040. and RCW 43.70.120. 00-19-117, § 246-130-090, filed 9/20/00, effective 10/21/00.]

Chapter 246-136 WAC

HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION—OCCUPATIONAL EXPOSURE NOTIFICATION

WAC

246-136-001	Purpose.
246-136-010	Definitions.
246-136-020	Agreements between local health jurisdictions and local jails.
246-136-030	Duties of local jail administrators.
246-136-040	Duties of health officers.

(2003 Ed.)

WAC 246-136-001 Purpose. These regulations establish procedures to assure effective communication between health officials and correctional and jail health care administrators or infection control coordinators in the event a correctional or jail staff member is substantially exposed to the bodily fluids of an offender or detainee in the course of their official duties.

[Statutory Authority: RCW 70.24.107. 97-22-027, § 246-136-001, filed 10/29/97, effective 11/29/97.]

WAC 246-136-010 Definitions. The following definitions apply in the interpretation and enforcement of chapter 246-136 WAC:

(1) "HIV" means human immunodeficiency virus.

(2) "Local health department" means the city, town, county, or district agency providing public health services to persons within the area, as provided in chapters 70.05, 70.08 and 70.46 RCW.

(3) "Local health officer" means the individual appointed under chapter 70.05 RCW as the health officer for the local health department, or appointed under chapter 70.08 RCW as the director of public health of a combined city-county health department.

(4) "Local jail administrator" means the individual appointed to operate a jail facility as defined in RCW 70.48.020.

(5) "State health officer" means the person designated by the secretary of the department of health to serve as statewide health officer, or, in the absence of such designation, the person having primary responsibility for public health matters in the state.

[Statutory Authority: RCW 70.24.107. 97-22-027, § 246-136-010, filed 10/29/97, effective 11/29/97.]

WAC 246-136-020 Agreements between local health jurisdictions and local jails. By November 1, 1997, local health officials and local jail administrators shall establish interagency agreements to include at a minimum:

(1) The title of the official in the local health department assigned the duty for disclosing sexually transmitted disease information as required by RCW 70.24.105 (4)(b) and the title of the health care administrator or infection control coordinator in the local jail assigned the duty of receiving of such information;

(2) A statement indicating that sexually transmitted disease status information is confidential and that release of such information is governed by law;

(3) The title of the person in the local jail or local health jurisdiction assigned the duty for disclosing sexually transmitted disease information or other communicable disease information to the exposed jail staff member in accordance with RCW 70.24.105 (4)(d);

(4) The anticipated number of days or hours from the time:

(a) That a member of a jail staff has been possibly substantially exposed to the bodily fluids of a detained person to the time that report has been provided to the local health officer;

(b) That such a report has been received by the local health officer to the time that a determination of substantial

exposure has been made and, if appropriate, the detained person is ordered to be tested for HIV;

(c) That mandated or other known HIV test results and other communicable disease information is disclosed only as permitted by law to the exposed jail staff person, after the detained person has been ordered to be tested for HIV; and

(d) That the results of a new HIV test done as a result of the exposure is disclosed to the exposed jail staff person, after the detained person has been ordered to be tested for HIV;

(5) The title and position of the position responsible for submitting to the department of health by December 1, 1997, a report to include:

(a) The number of negative, positive and other HIV test results disclosed to department of corrections health staff or local jail health staff as required by RCW 70.24.105 (4)(a) and (b);

(b) A listing, without jail staff or detainee identifying information, of the requests for determination of substantial exposure, the determination made and the circumstances of the exposure, and the information disclosed to the exposed jail staff person from existing records, and information disclosed to the exposed jail staff person as a new HIV or other testing.

[Statutory Authority: RCW 70.24.107. 97-22-027, § 246-136-020, filed 10/29/97, effective 11/29/97.]

WAC 246-136-030 Duties of local jail administrators.

Local jail administrators shall:

(1) Develop communicable disease prevention guidelines as required by chapter 70.48 RCW that are consistent with chapter 246-100 WAC, WAC 296-62-08001 and the most recent edition of *Control of Communicable Diseases in Man*;

(2) Submit those communicable disease prevention guidelines to the local health officer for review and comment;

(3) Develop and implement policies and procedures for the distribution of communicable disease prevention guidelines to all jail staff who are at risk of occupational exposure to communicable diseases; and

(4) By November 1, 1997, submit to the department of health a summary of changes in policies and procedures as a result of chapter 345, Laws of 1997.

[Statutory Authority: RCW 70.24.107. 97-22-027, § 246-136-030, filed 10/29/97, effective 11/29/97.]

WAC 246-136-040 Duties of health officers. State and local health officers shall:

(1) Comply with the provisions of RCW 70.24.105(4);

(2) Make available the sexually transmitted disease status of a department of corrections offender who has had a mandatory test conducted pursuant to RCW 70.24.340(1), 70.24.360, or 70.24.370 to the department of corrections health care administrator or infection control coordinator identified above;

(3) Make available the sexually transmitted disease status of a person detained in a jail who has had a mandatory test conducted pursuant to RCW 70.24.340(1), 70.24.360, or 70.24.370 as per the interagency agreement in WAC 246-136-020; and

(4) Submit a copy of the interagency agreement required under WAC 246-136-020 to the Department of Health, Post Office Box 47840, Olympia, WA 98504-7840 upon execution or amendment of the agreement.

[Statutory Authority: RCW 70.24.107. 97-22-027, § 246-136-040, filed 10/29/97, effective 11/29/97.]

Chapter 246-138 WAC

TESTING OF GOOD SAMARITANS FOR CERTAIN INFECTIOUS DISEASES

WAC

246-138-001	Purpose.
246-138-010	Definitions.
246-138-020	How is a good samaritan eligible for no cost testing for certain infectious diseases?
246-138-030	What are the duties and responsibilities of the local health department?
246-138-040	Limitations.

WAC 246-138-001 Purpose. The purpose of this rule is to ensure eligible good samaritans may receive testing for certain infectious diseases at no cost to the good samaritan.

[Statutory Authority: 1999 c 391 § 2. 00-01-066, § 246-138-001, filed 12/13/99, effective 1/13/00.]

WAC 246-138-010 Definitions. The following definitions apply throughout this chapter unless the context clearly indicates otherwise.

(1) "Certain infectious diseases" means hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

(2) "Good samaritan" means a person rendering emergency care or transportation as described in RCW 4.24.300 and 4.24.310.

(3) "Local health department" means the city, town, county, or district agency providing public health services to persons within the area, as provided in chapters 70.05 and 70.08 RCW.

(4) "Local health officer" means the individual appointed under chapter 70.05 RCW as the health officer for the local health department, or appointed under chapter 70.08 RCW as the director of public health of a combined city-county health department.

(5) "Exchange of bodily fluids significantly increasing the odds of being exposed to a deadly infectious disease":

(a) For HBV, HCV, and HIV means physical contact resulting in exposure presenting possible risk, limited to:

(i) A physical assault upon the exposed person involving blood or semen;

(ii) Intentional, unauthorized, nonconsensual use of needles or sharp implements to inject or mutilate the exposed person;

(iii) An accidental parenteral or mucous membrane or nonintact skin exposure to blood, semen, or vaginal fluids; or

(iv) For HBV only, mucous membrane or nonintact skin exposure to saliva; or

(b) For HAV means physical contact resulting in oral exposure of the good samaritan to the feces of the person she/he was assisting.

[Statutory Authority: 1999 c 391 § 2. 00-01-066, § 246-138-010, filed 12/13/99, effective 1/13/00.]

WAC 246-138-020 How is a good samaritan eligible for no cost testing for certain infectious diseases? To receive no cost testing, a good samaritan must:

(1) Seek testing from the local health department of the county of her or his residence within thirty days of the exchange of bodily fluids significantly increasing the odds of being exposed to a deadly infectious disease;

(2) Have sustained an exchange of bodily fluids significantly increasing the odds of being exposed to a deadly infectious disease as determined by the local health officer or authorized representative, while rendering emergency care or transportation; and

(3) Be uninsured or have health insurance that does not cover most of the costs of testing.

[Statutory Authority: 1999 c 391 § 2. 00-01-066, § 246-138-020, filed 12/13/99, effective 1/13/00.]

WAC 246-138-030 What are the duties and responsibilities of the local health department? Local health departments, during regular hours of operation shall:

(1) Determine whether the good samaritan has sustained an exchange of bodily fluids significantly increasing the odds of being exposed to a deadly infectious disease;

(2) Determine which certain infectious diseases or other infectious diseases are appropriate to test for, which tests should be done and when the tests should be done, based on the nature and time of the exchange of bodily fluids significantly increasing the odds of being exposed to a deadly infectious disease and the natural history of infection for the diseases in question;

(3) Offer counseling and testing, consistent with recommendations in the sixteenth edition 1995 of *Control of Communicable Diseases Manual*, edited by Abram S. Benenson, published by the American public health association, for those infectious diseases to which the good samaritan is determined to have sustained an exchange of bodily fluids significantly increasing the odds of being exposed to a deadly infectious disease;

(4) Obtain the informed consent of the good samaritan prior to testing;

(5) Provide the good samaritan with the results of the testing and the possible need for retesting;

(6) Refer the good samaritan to an appropriate health care provider for any subsequent needed care in the event of a positive test; and

(7) Maintain the confidentiality of those medical records as required by chapters 70.24 RCW and 246-100 WAC.

[Statutory Authority: 1999 c 391 § 2. 00-01-066, § 246-138-030, filed 12/13/99, effective 1/13/00.]

WAC 246-138-040 Limitations. Nothing in this chapter requires a local health department to provide health care services beyond the counseling, testing, and referral described in this chapter.

[Statutory Authority: 1999 c 391 § 2. 00-01-066, § 246-138-040, filed 12/13/99, effective 1/13/00.]

(2003 Ed.)

Chapter 246-145 WAC

ELECTROLOGY AND TATTOOING STANDARDS FOR STERILIZATION PROCEDURES AND INFECTION CONTROL

WAC

246-145-001	Purpose and scope.
246-145-010	Definitions.
246-145-020	Standard universal precautions for preventing the spread of disease.
246-145-030	Sterile procedures.
246-145-040	Penalty for not complying with rules.

WAC 246-145-001 Purpose and scope. These rules establish standard universal precautions for preventing the spread of diseases by using sterilization procedures and infection control in the commercial practices of electrology and tattooing.

[Statutory Authority: RCW 70.54.340. 02-11-109, § 246-145-001, filed 5/20/02, effective 6/20/02.]

WAC 246-145-010 Definitions. For the purpose of these rules, the following words and phrases have the following meanings unless the context clearly indicates otherwise.

(1) "Electrologist" means a person who practices the business of electrology for a fee.

(2) "Electrology" means the process of permanently removing hair by using solid needle or probe electrode epilation, including:

(a) Thermolysis, being of shortwave, high frequency type;

(b) Electrolysis, being a galvanic type; or

(c) A combination of both which is accomplished by a superimposed or sequential blend.

(3) "Gloves" means medical grade gloves that are FDA approved.

(4) "Sterilization" means a process that destroys all forms of microbial life, including highly resistant bacterial spores.

(5) "Tattoo artist" means a person who practices the business of tattooing for a fee.

(6) "Tattooing" means the indelible mark, figure, or decorative design introduced by insertion of nontoxic dyes or pigments into or under the subcutaneous portion of the skin upon the body of a live human being for cosmetic or figurative purposes.

[Statutory Authority: RCW 70.54.340. 02-11-109, § 246-145-010, filed 5/20/02, effective 6/20/02.]

WAC 246-145-020 Standard universal precautions for preventing the spread of disease. (1) Electrologists - The following universal precautions must be used by electrologists in the care of all clients.

(a) Wash hands with soap and water immediately before and after each client contact;

(b) Wash hands and other skin surfaces immediately and thoroughly if contaminated with blood or other body fluids;

(c) Wash hands immediately before fresh, unused gloves are put on and after gloves are removed;

(d) Clean the client's skin by applying an antiseptic or antibacterial solution prior to and following treatment;

(e) Wear fresh, unused gloves with each client to prevent skin and mucous membrane exposure contact with blood or other body fluids of each client;

(f) Wear gloves for touching blood and body fluids, mucous membranes, or nonintact skin of all clients, and for handling items or surfaces soiled with blood or body fluids;

(g) Change gloves after contact with each client;

(h) Immediately remove gloves that are torn or have small pinholes, wash hands and put on fresh, unused gloves;

(i) Take precautions to prevent injuries caused by needles and other sharp instruments or devices during procedures; when cleaning used instruments; during disposal of used needles; and when handling sharp instruments after procedures;

(j) Prevent needlestick injuries by not recapping needles, not bending or breaking needles by hand and by not otherwise manipulating by hand;

(k) Dispose of used disposable needles and other sharp items in puncture-resistant containers;

(l) Inspect hands for small cuts, sores and abrasions; if present, use a Seal-skin product or bandage. If the electrologist has weeping dermatitis or draining sores, the electrologist should avoid contact with clients and equipment until the weeping dermatitis or draining sores are healed;

(m) Regularly clean and disinfect countertops; regularly clean walls when visibly soiled; regularly vacuum and clean carpets and floors; and

(n) Clean and disinfect other frequently touched surfaces including, but not limited to, equipment and lamps between each client.

(2) Tattoo artists - The following universal precautions must be used by tattoo artists in the care of all clients.

(a) Wash hands with soap and water immediately before and after each client contact;

(b) Wash hands and other skin surfaces immediately and thoroughly if contaminated with blood or other body fluids;

(c) Wash hands immediately before fresh, unused gloves are put on and after gloves are removed;

(d) Clean the client's skin by applying an antiseptic or antibacterial solution prior to and following treatment;

(e) Wear fresh, unused gloves with each client to prevent skin and mucous membrane exposure contact with blood or other body fluids of each client;

(f) Wear gloves for touching blood and body fluids, mucous membranes, or nonintact skin of all clients, and for handling items or surfaces soiled with blood or body fluids;

(g) Change gloves after contact with each client;

(h) Immediately remove gloves that are torn or have small pinholes, wash hands and put on fresh, unused gloves;

(i) Take precautions to prevent injuries caused by needles and other sharp instruments or devices during procedures, when cleaning used instruments, during disposal of used needles, and when handling sharp instruments after procedures;

(j) Prevent needlestick injuries by not recapping needles, not bending or breaking needles by hand and by not otherwise manipulating by hand;

(k) Dispose of used disposable needles and other sharp items in puncture-resistant containers;

(l) Inspect hands for small cuts, sores, and abrasions; if present, use a Seal-skin product or bandage. If a tattoo artist has weeping dermatitis or draining sores, the tattoo artist should avoid contact with clients and equipment until the weeping dermatitis or draining sores are healed;

(m) Regularly clean and disinfect countertops; regularly clean walls when visibly soiled; and regularly vacuum and clean carpets and floors;

(n) Clean and disinfect other frequently touched surfaces such as, clip cords, pigment holders, pigment bottles, pens, equipment and lamps between each client; and

(o) Take other measures to prevent cross contamination as included in national standards per RCW 70.54.340.

[Statutory Authority: RCW 70.54.340. 02-11-109, § 246-145-020, filed 5/20/02, effective 6/20/02.]

WAC 246-145-030 Sterile procedures. (1) Electrologist - To ensure that clients are not exposed to disease through needles or other instruments, electrologists must:

(a) Use single-use, presterilized disposable needles on one client and then dispose of the needle immediately in a puncture-resistant container;

(b) Not use reusable needles;

(c) Use single-use sharp items on only one client and dispose of the items immediately in a puncture-resistant container;

(d) Only reuse cleaned and sterilized sharp items and instruments that are intended for multiple use;

(e) Thoroughly clean and sterilize reusable sharp items and instruments between clients;

(f) Accumulate reusable sharp items and instruments in a holding container by submersion in a solution of a protein-dissolving enzyme detergent and water;

(g) Sterilize reusable items in a steam autoclave or dry-heat sterilizer, which is used, cleaned and maintained according to the manufacturer's instructions;

(h) Resterilize a reusable sterile instrument before using it on a client, if it is contaminated by dropping, by touching an unsterile surface, by a torn package, by the package being punctured, damaged, wet or by some other means;

(i) Immediately dispose of a single-use item in a puncture-resistant container, if it is contaminated by dropping, by touching an unsterile surface, by a torn package, by the package being punctured, damaged, wet or by some other means;

(j) Immediately dispose of an instrument in a puncture-resistant container if the expiration date has passed; and

(k) Monitor sterilizers to determine that all conditions of sterilization are met. This includes:

(i) Assuring that sterilizers have a thermometer and timer to indicate whether adequate heat has been applied to packaged equipment;

(ii) Using or checking chemical indicators on each package to assure the items have been exposed to the sterilization process;

(iii) Sterilizers must be tested by biological spore tests according to the manufacturer's instructions. In the event of a positive biological spore test, the electrologist must take immediate action to ensure all conditions of sterilization are met; and

(iv) Documentation of monitoring must be maintained either in the form of a log reflecting dates and person(s) conducting the testing or copies of reports from an independent testing entity. The documentation must be maintained at least three years.

(2) Tattoo artists - To ensure that clients are not exposed to disease through needles or other instruments, tattoo artists must:

(a) Use single-use, presterilized disposable needles on one client and then dispose of the needle immediately in a puncture-resistant container;

(b) Not use reusable needles;

(c) Use single-use sharp items on only one client and dispose of the items immediately in a puncture-resistant container;

(d) Only reuse cleaned and sterilized sharp items and instruments that are intended for multiple use;

(e) Thoroughly clean and sterilize reusable sharp items and instruments between clients;

(f) Accumulate reusable sharp items and instruments in a holding container by submersion in a solution of a protein-dissolving enzyme detergent and water;

(g) Sterilize reusable items in a steam autoclave or dry-heat sterilizer, which is used, cleaned and maintained according to the manufacturer's instructions;

(h) Resterilize a reusable sterile instrument before using it on a client, if it is contaminated by dropping, by touching an unsterile surface, by a torn package, by the package being punctured, damaged, wet or by some other means;

(i) Immediately dispose of a single-use item in a puncture-resistant container, if it is contaminated by dropping, by touching an unsterile surface, by a torn package, by the package being punctured, damaged, wet or by some other means;

(j) Immediately dispose of an instrument in a puncture-resistant container if the expiration date has passed; and

(k) Monitor sterilizers to determine that all conditions of sterilization are met. This includes:

(i) Assuring that sterilizers have a thermometer and timer to indicate whether adequate heat has been applied to packaged equipment;

(ii) Using or checking chemical indicators on each package to assure the items have been exposed to the sterilization process;

(iii) Sterilizers must be tested by biological spore tests according to the manufacturer's instructions. In the event of a positive biological spore test, the tattoo artist must take immediate action to ensure all conditions of sterilization are met; and

(iv) Documentation of monitoring must be maintained either in the form of a log reflecting dates and person(s) conducting the testing or copies of reports from an independent testing entity. The documentation must be maintained at least three years.

[Statutory Authority: RCW 70.54.340. 02-11-109, § 246-145-030, filed 5/20/02, effective 6/20/02.]

WAC 246-145-040 Penalty for not complying with rules. Any electrologist or tattoo artist out of compliance with the rules in this chapter will be guilty of a misdemeanor.

(2003 Ed.)

[Statutory Authority: RCW 70.54.340. 02-11-109, § 246-145-040, filed 5/20/02, effective 6/20/02.]

Chapter 246-170 WAC

TUBERCULOSIS—PREVENTION, TREATMENT, AND CONTROL

WAC

246-170-002	Findings and purpose.
246-170-011	Definitions.
246-170-021	Responsibility of local health officers.
246-170-031	Local health department responsibilities.
246-170-035	Tuberculin skin testing and medication administration training.
246-170-041	Inpatient services requirements.
246-170-051	Procedures for involuntary testing, treatment, and detention.
246-170-055	Due process proceedings.
246-170-061	Initiation of testing or treatment.
246-170-065	Persons already detained, confined, or committed.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-170-001	Purpose. [Statutory Authority: RCW 70.33.020. 92-02-018 (Order 224), § 246-170-001, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-001, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-010, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-010	Definitions. [Statutory Authority: RCW 70.33.020. 92-02-018 (Order 224), § 246-170-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-010, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-020, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-020	Responsibility of local health officers. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-020, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-030, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-030	Local health department responsibilities. [Statutory Authority: RCW 70.33.020. 92-02-018 (Order 224), § 246-170-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-030, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-040, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-040	Inpatient services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-040, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-050, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-050	Infection control. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-050, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-060, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-060	Clinical services. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-060, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-070, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
246-170-070	Home treatment. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-170-070, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-080, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.

- 246-170-080 Case monitoring. [Statutory Authority: RCW 70.33.020, 92-02-018 (Order 224), § 246-170-080, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-170-080, filed 12/27/90, effective 1/31/91; Order 138, § 248-99-090, filed 2/7/77; Order 848, § 248-99-090, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.
- 246-170-090 Program review. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-170-090, filed 12/27/90, effective 1/31/91; Order 848, § 248-99-100, filed 8/23/73.] Repealed by 95-04-035, filed 1/24/95, effective 1/24/95. Statutory Authority: ESB 6158 and chapter 70.28 RCW.

WAC 246-170-002 Findings and purpose. (1) The board of health finds that:

(a) Pulmonary tuberculosis is a life-threatening airborne disease that can be casually transmitted without significant interaction with an infectious person. Tuberculosis has reemerged as an epidemic disease nationally, and though Washington state is not in an epidemic yet, the increasing number of cases in Washington state each year clearly demonstrate that absent timely and effective public health intervention in individual cases, the residents of the state of Washington are at risk of being infected by tuberculosis.

(b) In order to limit the spread of tuberculosis, it is essential that individuals who have the disease are diagnosed and treated before they infect others. Diagnosis requires a variety of methodologies including skin tests, x-rays, and laboratory analysis of sputum samples.

(c) A person with infectious tuberculosis who does not voluntarily submit to appropriate testing, treatment, or infection control methods poses an unreasonable risk of spreading the disease to those who come into the infectious person's proximity.

(d) Although the recommended course of treatment for tuberculosis varies somewhat from one individual to another, at a minimum, effective treatment requires a long-term regimen of multiple drug therapy. Some drugs are effective with some individuals but not others. The development of the appropriate course of treatment for any one individual may require trying different combinations of drugs and repeated drug susceptibility testing. The course of treatment may require as long as several years to complete.

(e) A person who begins a course of treatment for tuberculosis and fails to follow the recommended course through to completion is highly likely to relapse at some point into infectious tuberculosis. The person will most likely then be infected with what is known as multiple drug resistant tuberculosis, which is more virulent, more difficult to treat, and more likely to result in fatality. A person who is infectious with multiple drug resistant tuberculosis poses a significant risk of transmitting multiple drug resistant tuberculosis to other persons, unless appropriate treatment and infection control methods are followed.

(f) Multiple drug resistant tuberculosis is a significant element in the epidemic that is being encountered nationwide, and effective public health interventions are necessary to prevent that epidemic from developing in or spreading to Washington state.

(2) The following rules are adopted for the purpose of establishing standards necessary to protect the public health by:

(a) Assuring the diagnosis, treatment, and prevention of tuberculosis; and

(b) Assuring that the highest priority is given to providing appropriate individualized preventive and curative treatment in the least restrictive setting.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-002, filed 1/24/95, effective 1/24/95.]

WAC 246-170-011 Definitions. Unless the context clearly requires otherwise, the definitions in this section apply throughout this chapter.

"Case management" means a comprehensive, ongoing identification of needs, including the need for any medical, social, educational, or other support services; the development and implementation of a detailed plan of services and related activities; use of community linkages; and advocacy for the client performed in a prescribed, accountable manner.

"Confirmed" or "confirmed case" means an individual who has a positive bacteriologic culture for *Mycobacterium tuberculosis* complex or a suspected case that shows response to an appropriate course of treatment.

"Department" means the department of health.

"Detention" or "detain" means the act of restricting an individual's movement by confining the person.

"Directly observed therapy (DOT)" and "directly observed preventive therapy (DOPT)" mean providing oral medications to patients and observing ingestion of medications by patients.

"Infected" means an individual who has tubercle bacilli as identified by a positive tuberculin skin test, but is not capable of transmitting the organism to another person.

"Infectious" means the stage of disease in which an individual transmits viable tuberculosis organisms into the air.

"Inpatient" means health care furnished to an individual who has been admitted to a hospital.

"Outpatient" means health care furnished to an individual who is not an inpatient.

"Personal protective equipment" means respirators and other equipment as required by the department of labor and industries.

"Prevention" means the interventions that interrupt the spread of tuberculosis, either within an individual, within the population, or both.

"Preventive therapy" means either treatment to prevent infection in an uninfected person or treatment to prevent disease in an infected person.

"Primary health care provider" means the person who assumes the day-to-day medical care of a tuberculosis patient.

"Suspected case" means an individual with signs or symptoms suggestive of tuberculosis disease prior to confirmation.

"Treatment" means a course of long-term multiple drug or other appropriate therapy prescribed for an individual with suspected or confirmed disease in accordance with accepted medical practice and current applicable national and state guidelines, and may include preventive therapy.

"Tuberculin skin test" means the introduction of purified protein derivative (PPD) by the Mantoux method.

"Tuberculosis community health worker" means an unlicensed person trained to perform tuberculin skin testing, directly observed therapy, and directly observed preventive therapy and working pursuant to chapter 70.28 RCW as part of a program established by a state or local health officer to control tuberculosis.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-011, filed 1/24/95, effective 1/24/95.]

WAC 246-170-021 Responsibility of local health officers. Each county, city-county and district health officer is responsible for the control of tuberculosis within a jurisdiction. Each health officer shall act as or shall designate a physician to act as tuberculosis control officer. This individual shall coordinate all aspects of the prevention, treatment, and control program.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-021, filed 1/24/95, effective 1/24/95.]

WAC 246-170-031 Local health department responsibilities. (1) Each local health department shall assure the provision of a comprehensive program for the prevention, treatment, and control of tuberculosis. Services shall include:

- (a) Prevention and screening, with emphasis on screening of high risk populations;
- (b) Diagnosis and monitoring, including laboratory and radiology;
- (c) Individualized treatment planning consistent with American Thoracic Society/Centers for Disease Control and Prevention statements based on the least restrictive measures necessary to assure appropriate treatment; and
- (d) Case management.

(2) In the absence of third party reimbursement, the local health department shall assure the provision of inpatient or outpatient care, including DOT/DOPT and case management.

(3) Each local health department shall maintain a register of all diagnosed or suspected cases of tuberculosis. In addition, each local health department shall also maintain a register of individuals to whom that health department is providing preventive therapy. Quarterly status reports on suspected and diagnosed cases shall be furnished to the department of health tuberculosis control program.

(4) A physician knowledgeable in the diagnosis and treatment of tuberculosis approved by the department shall be available to provide review of diagnoses, plans of management and, if appropriate, discharge from inpatient facilities.

(5) Sufficient nursing, clerical, and other appropriate personnel shall be provided to furnish supervision of preventive and outpatient treatment, surveillance, suspect evaluation, epidemiologic investigation, and contact workup.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-031, filed 1/24/95, effective 1/24/95.]

WAC 246-170-035 Tuberculin skin testing and medication administration training. The department shall make available a course to be used by the state tuberculosis control

program or local health departments to train tuberculosis community health workers.

This course shall include, but not be limited to:

- (1) Tuberculosis infection and disease, including prevention, transmission, pathogenesis, diagnosis and treatment;
- (2) The administration, reading, and interpretation of the Mantoux tuberculin skin test;
- (3) The performance of oral directly observed therapy and directly observed preventive therapy;
- (4) Adverse reactions to tuberculosis medications and how to monitor patients for adverse reactions;
- (5) Appropriate referral mechanisms for positive skin tests, adverse reactions, or other medical needs;
- (6) Personal health and safety requirements including the use of personal protective equipment.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 94-20-080, § 246-170-035, filed 10/4/94, effective 11/4/94.]

WAC 246-170-041 Inpatient services requirements.

(1) Inpatient services to infectious or suspected cases shall be provided in hospitals or hospital units of correctional facilities. These facilities shall meet infection control program requirements pursuant to WAC 246-318-035, and shall provide:

- (a) A single-patient room consistent with the guidelines set forth in the *1994 CDC Guidelines For Preventing the Transmission of Tuberculosis in Health Care Facilities*, or as hereafter amended. Copies of these guidelines are available from the Washington state department of health, TB control program;
- (b) Medical, nursing, laboratory, radiology, pharmacy, patient education, and social services;
- (c) Discharge conferences involving at least the current primary provider, a local health department representative, and transferring and receiving facility representatives.

(2) Suspected and infectious cases may be housed and treated in other settings not meeting the requirements of this section only as approved by the local health officer.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-041, filed 1/24/95, effective 1/24/95.]

WAC 246-170-051 Procedures for involuntary testing, treatment, and detention. (1) A local health officer shall make reasonable efforts to obtain voluntary compliance with requests for examination, testing, and treatment prior to initiating the procedures for involuntary detention.

(2) If the local health officer has reason to believe that:

- (a) A person is a suspected case, and that the person has failed to comply with a documented request from a health care practitioner or the local health officer to submit to examination and testing;
- (b) A person with confirmed tuberculosis is failing to comply with an individual treatment plan approved by the local health officer;
- (c) A person who is either a suspected or confirmed case and is failing to comply with infection control directives issued by the local health officer; or

(d) A person is a suspected or confirmed case of tuberculosis based upon generally accepted standards of medical and public health science. A local health officer shall investigate

and evaluate the factual basis supporting his or her "reason to believe";

then the health officer may detain the person, cause the person to be detained by written order, or petition the superior court *ex parte* for an order to take the person into emergency detention for testing or treatment, or both. The period of detention shall not exceed seventy-two hours, excluding weekends and holidays.

(3) At the time of detention the person detained shall be given the following written notice:

NOTICE: You have the right to a superior court hearing within seventy-two hours of detention, excluding holidays and weekends. You have the right to legal counsel. If you are unable to afford legal counsel, then counsel will be appointed for you at government expense and you should request the appointment of counsel at this time. If you currently have legal counsel, then you have an opportunity to contact that counsel for assistance.

You have a right to contest the facts alleged against you, to cross-examine witnesses, and to present evidence and witnesses on your behalf.

You have a right to appeal any decision made by the court.

You may be given appropriate TB medications only on your informed consent, or pursuant to a court order.

(4) If a person is involuntarily detained under this section, within one judicial day of initial detention, the local health officer shall file with the superior court in the county of detention a petition for detention. A petition filed under this section shall specify:

(a) The basis for the local health officer's belief that the respondent is either a suspected or confirmed case; including the name, address and phone numbers of whom the health officer expects to testify in support of the petition for detention and identification of any and all medical tests and records relied upon by the local health officer;

(b) The specific actions taken by the local health officer to obtain voluntary compliance by the respondent with recommended examination and testing or treatment, as the case may be;

(c) The nature and duration of further detention or other court-ordered action that the local health officer believes is necessary in order to assure that the respondent is appropriately tested or treated;

(d) The basis for believing that further detention or other court-ordered action is necessary to protect the public health; and

(e) Other information the local health officer believes is pertinent to the proper resolution of the petition.

(5) Service on respondent. The health officer shall serve a copy of the petition on the individual named therein at the time of the detention. If the person informs the health officer that he or she is represented by legal counsel, service on such counsel shall be made by delivering a copy of the petition to the attorney's office no later than the time of filing the petition with the superior court.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-051, filed 1/24/95, effective 1/24/95.]

[Title 246 WAC—p. 164]

WAC 246-170-055 Due process proceedings. (1) A hearing on the petition for detention filed under WAC 246-170-051 shall be conducted in superior court within seventy-two hours after initial detention, excluding weekends and holidays. The local health officer shall have the burden of proving the allegations set forth in the petition by a preponderance of the evidence. The person named in the petition shall have the right to cross-examine witnesses, present evidence, and be represented by an attorney at any hearing held on the petition. If the person is indigent and requests appointment of legal counsel, legal counsel shall be appointed at public expense at least twenty-four hours prior to the superior court hearing.

(2) At the conclusion of the hearing, the court shall consider the evidence, the action taken by the health officer to secure voluntary compliance by the patient, and the purpose and intent of the public health laws, including this chapter, and may take one of the following actions:

(a) If the court finds that the respondent is a suspected case, the court may enter an order requiring that the person be subjected to further examination, testing, and treatment as specified in the court's order. If the court finds that further detention of the respondent is necessary in order to assure that the examination, testing, and treatment occurs, or to protect the public health the court may order that the respondent be detained for an additional period not to exceed forty-five days. The results of testing conducted under this chapter shall be provided to the court and the person detained or his or her legal counsel as soon as they are available to the local health officer. The court may then conduct an additional hearing to determine whether the person is a confirmed case and, if so, whether further measures are necessary to protect the public health pursuant to (b) or (c) of this subsection.

(b) If the court finds that the person is a confirmed case, that further measures less restrictive than detention of the respondent are necessary to assure that appropriate treatment is implemented and that imposition of less restrictive measures will be sufficient to protect the public health, the court may enter an order setting forth such measures and ordering the respondent to comply with the measures.

(c) If the court finds that the person is a confirmed case, that further detention of the respondent is necessary to protect the public health, and that imposition of less restrictive measures will not be sufficient to protect the public health, the court may order that the respondent be detained and treated for an additional period not to exceed forty-five days.

(d) If the court finds that there is insufficient evidence to support the petition for detention, then the court shall immediately release the person detained.

(e) A person detained under this chapter may be released prior to the expiration of the court-ordered detention if the health officer or the court finds that less restrictive measures are sufficient to protect the public health. The court may impose such conditions on the release of the person as the court finds are necessary to protect the public health. A person detained under this chapter may also petition the court for release based upon new evidence or a change in circumstances.

(4) The court may extend a period of court-ordered detention for additional periods not to exceed one hundred

(2003 Ed.)

eighty days each following a hearing as described in WAC 246-170-051 and this section, if the court finds that the requirements of subsection (2)(a), (b), or (c) of this section have been met and if the court finds that further detention is necessary to assure that appropriate treatment is implemented, and that imposition of less restrictive measures are not sufficient to protect the public health. As an alternative to extending the period of detention, if the court finds after hearing that further measures less restrictive than detention are necessary to assure that appropriate treatment is continued, and that imposition of less restrictive measures will be sufficient to protect the public health, the court may enter an order setting forth the measures and ordering the respondent to comply.

(5) In the event that a person has been released from detention prior to completion of the prescribed course of treatment and fails to comply with the prescribed course of treatment, the health officer where that individual is found may detain that person, and any court having jurisdiction of the person may order the person detained for an additional period or periods, not to exceed one hundred eighty days each, as the court finds necessary to protect the public health.

(6) If a person has been detained in a county other than the county in which the court that originally ordered the detention is located, venue of the proceedings may remain in the original county, or may be transferred to the county of detention. Change in venue may be sought either by the local health officer in the original county or in the county of detention, or by the person detained. Except as otherwise agreed between the original health officer and the health officer in the county of detention, the original health officer retains jurisdiction over the detained person, including financial responsibility for costs incurred in implementing and continuing the detention.

(7) Court orders entered under this chapter shall be entered only after a hearing at which the respondent is accorded the same rights as at the initial hearing on the petition for detention.

(8)(a) When a court order for detention is issued, the transporting law enforcement agency and the receiving facility shall be informed of the infectious TB status of the person for disease control and the protection of the health of the staff, other offenders and the public. Such information shall be made available prior to the transport.

(b) Whenever disclosure is made pursuant to this subsection, it shall be accompanied by a statement in writing which includes the following or substantially similar language: "This information has been disclosed to you from records whose confidentiality is protected by state law. State law prohibits you from making any further disclosure of it except as authorized by state law."

(c) Transporting agencies and/or receiving facilities shall establish and implement policies and procedures that maintain confidentiality related to the detained person's medical information as defined in this subsection and state law.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-055, filed 1/24/95, effective 1/24/95.]

WAC 246-170-061 Initiation of testing or treatment.

If a person has been detained under WAC 246-170-051 or (2003 Ed.)

246-170-055, the health officer may begin testing or treatment, with informed consent, or pursuant to a court order as appropriate, pending the hearing required under WAC 246-170-055.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-061, filed 1/24/95, effective 1/24/95.]

WAC 246-170-065 Persons already detained, confined, or committed. (1) The provisions of WAC 246-170-051 through 246-170-061 do not apply to persons who have been lawfully detained, confined, or committed to the custody of a penal institution, a mental health facility, or another public or private institution. The person in charge of such facility or his or her designee shall report to the local health officer the names of persons in custody who are either a suspected or confirmed case. The report shall include information indicating the date upon which the person is to be released from the facility, if known, and if no specific release date has been determined, the earliest date upon which release is likely to occur. A person in custody may be ordered to undergo examination and testing or treatment, as appropriate, by the person in charge of the facility or designee, subject to such constitutional or other requirements as may be applicable.

(2) The person in charge of a custodial facility shall notify the local health officer and the department of the release of a person who is at the time of release reasonably believed to be either a suspected or confirmed case. The notice shall be given to the local health officer where the facility is located and to the local health officer having jurisdiction over the place to which the person is being released, if known. The notice shall be given as early as is practical, but in no event later than the time of the actual release.

[Statutory Authority: ESB 6158 and chapter 70.28 RCW. 95-04-035, § 246-170-065, filed 1/24/95, effective 1/24/95.]

**Chapter 246-203 WAC
GENERAL SANITATION**

WAC

- 246-203-010 Definition—Public or common nuisance.
- 246-203-020 Spitting.
- 246-203-030 Common towel.
- 246-203-060 Water sold to the public for drinking purposes in bottles or other containers.
- 246-203-070 Ice sold for public use.
- 246-203-100 Disposal of human excreta.
- 246-203-120 Disposal of garbage, trash, rubbish, offal, dead animals, and manure.
- 246-203-130 Keeping of animals.
- 246-203-160 Sanitation of public buildings.
- 246-203-180 Piggeries.
- 246-203-200 Disease producing organisms for rodent extermination forbidden.
- 246-203-210 Common drinking cups.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

- 246-203-080 Pollution of ground water prohibited. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-080, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-080, filed 12/27/90, effective 1/31/91; Regulation .50.080, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

- 246-203-090 Stream pollution. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-090, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-090, filed 12/27/90, effective 1/31/91; Regulation .50.090, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.
- 246-203-110 Kitchen and laundry water. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-110, filed 12/27/90, effective 1/31/91; Regulation .50.110, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.
- 246-203-140 Stagnant water. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-140, filed 12/27/90, effective 1/31/91; Regulation .50.140, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.
- 246-203-150 Highway sanitation. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-150, filed 12/27/90, effective 1/31/91; Regulation .50.150, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.
- 246-203-170 Objectionable establishments and industrial wastes. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-170, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-170, filed 12/27/90, effective 1/31/91; Regulation .50.170, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

WAC 246-203-010 Definition—Public or common nuisance. For the purpose of these regulations, a public or common nuisance shall be considered as that which is set up, maintained or continued so as to be injurious to the health, or an obstruction to the use of property by interfering with the repose, health, safety or life of any considerable number of persons.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-010, filed 12/27/90, effective 1/31/91; Regulation .50.010, effective 3/11/60.]

WAC 246-203-020 Spitting. Spitting upon the floors or walls of a public building or buildings used for public assemblage, of a building used for manufacturing or industrial purposes, or upon the floors or platforms or any part of any railroad or trolley car or ferry boat, or any other public conveyance, is prohibited.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-020, filed 12/27/90, effective 1/31/91; Regulation .50.020, effective 3/11/60.]

WAC 246-203-030 Common towel. No person, firm, corporation or authorities owning, in charge of, or in control of any lavatory or wash room in any hotel, theatre, lodging house, restaurant, factory, school, church, store, office building, railway or trolley station, or public conveyance by land, water or air, or other institution or conveyance frequented by the public, or which may be used for the purpose of public assembly or as a place of employment, shall provide in or about such lavatory or washroom any towel for common use.

The term "common use" in this section shall be construed to mean, the use of all or any portion of a towel by more than one person without adequate cleansing.

[Title 246 WAC—p. 166]

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-030, filed 12/27/90, effective 1/31/91; Regulation .50.030, effective 3/11/60.]

WAC 246-203-060 Water sold to the public for drinking purposes in bottles or other containers. (1) Quality. No water shall be sold, offered for sale or rendered available for drinking purposes in bottles or other containers unless such water is of a sanitary quality approved by the secretary of the department of health.

(2) **Inspection.** All plants for the preparation of water for sale in bottles or other containers for drinking purposes and the sources of the water supply shall be inspected as frequently as necessary by a representative of the department of health, and samples of water collected for sanitary analyses at the department of health laboratories.

(3) **Sterilizing containers.** Bottles or other containers in which water is sold for drinking purposes shall be sterilized before refilling. The method of sterilization shall be approved by the secretary of the department of health.

(4) **Water purification.** Processes of purification of waters that are to be sold for drinking purposes shall be approved by the secretary of the department of health before the water can be sold or offered for sale.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-060, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-060, filed 12/27/90, effective 1/31/91; Regulation .50.060, effective 3/11/60.]

WAC 246-203-070 Ice sold for public use. (1) Quality. No ice shall be sold, offered for sale or rendered available for use to the public unless such ice is of a sanitary quality approved by the secretary of the department of health.

(2) **Information.** Any company, corporation, city or individual selling artificial ice for public consumption shall submit to the department of health complete information concerning the source of water supply used for the manufacture of the ice and a detailed description of the manufacturing processes involved.

Any company, corporation, city or individual harvesting natural ice shall file full information with the department of health with regard to the source of the ice and method of storage.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-070, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-070, filed 12/27/90, effective 1/31/91; Regulation .50.070, effective 3/11/60.]

WAC 246-203-100 Disposal of human excreta. (1) Waters of the state defined. For the purpose of this regulation, the term "waters of the state" wherever used, shall include all streams and springs, and all bodies of surface and of ground water, whether natural or artificial, within the boundaries of the state.

(2) **Privies shall be fly-proof.** No privy, cesspool, septic tank, or other receptacle for human excrement shall be constructed, maintained or used so that flies have or may have access to the excrementitious matter contained therein.

(3) **Privies shall not drain in any waters of the state.** No privy, urinal, cesspool, septic tank or other receptacle for

human excrement shall be constructed, maintained or used which directly or indirectly drains or discharges over or upon the surface of the ground, or into any waters of the state either directly or indirectly; unless the contents of such urinal, cesspool, septic tank or receptacle for human excrement are subjected to some recognized sterilization treatment approved by the department of health.

(4) **Privies shall be kept clean.** All privies, urinals, cesspools, septic tanks or other receptacles for human excrement shall be cleansed at sufficiently frequent intervals to prevent the contents from overflowing.

(5) **Treating excreta on watersheds of public water supplies.** All schools, hamlets, villages, towns or industrial settlements which are now located or may be hereafter located on the watershed of any public water supply, not provided with a sewerage system, shall provide and maintain a reasonable system approved by the state director of health for collecting and disposing of all accumulations of human excrement within their respective jurisdiction or control.

(6) **Connection with sewer.** No privy, cesspool, septic tank or similar receptacle for human excrement shall be constructed, maintained or used on premises where a sewer is at all accessible which is part of a sewerage system from which sewage is lawfully discharged into the waters of the state.

(7) **Use of human excreta for fertilizer prohibited.** The contents of privies, cesspools, septic tanks or other receptacles for human excrement shall not be placed upon the surface of the ground or be used for fertilizing purposes for crops or gardens.

(8) **No privy near foodstuffs.** No privy, urinal, toilet or other receptacle for human excrement shall be constructed, maintained or used in any room, or have direct connection with any room wherein any kind of exposed foods or foodstuffs are prepared, stored or handled.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-100, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-100, filed 12/27/90, effective 1/31/91; Regulation .50.100, effective 3/11/60.]

WAC 246-203-120 Disposal of garbage, trash, rubbish, offal, dead animals, and manure. (1) **Definitions.** For the purpose of these regulations the following definitions shall apply:

"Garbage" shall mean all solid and semisolid kitchen refuse subject to decay or putrefaction and all market waste of animal and vegetable matter which was intended to be used as food.

"Trash and rubbish" shall mean all waste material not of putrescible nature, which for the purpose of this regulation shall include ashes.

"Offal" shall mean waste animal matter from butcher, slaughter, or packing houses.

"Dead animals" shall mean all animals large and small which may die or which may be killed for other than food purposes.

"Manure" shall mean cleanings from all barns, stables, corrals, pens, or cars used for stabling or penning of animals or fowl.

(2) **Methods of disposal.** Garbage, offal and manure; or rubbish, trash, and ashes mixed with garbage, offal or manure

(2003 Ed.)

shall be disposed of by incineration, burial, sanitary fill or other method approved, and within a time limit set by the health officer. Such material shall not be disposed of by being deposited in any ditch, gulch, ravine, river, stream, lake, pond, nor upon the surface of the ground, on any highway rights of way, where it may become a nuisance or menace to health through the breeding of flies, harboring of rodents, or pollution of water.

(3) **Dead animals.** The carcass of any dead animal shall be removed and disposed of by burial, incineration or other proper method within twenty-four hours after death. If the carcass is buried it shall be placed so that every part shall be covered by at least two feet of earth and at a location not less than 100 feet from any well, spring, stream or other surface waters, and in a place not subject to overflow. In all cases of death from communicable disease, the carcass, if disposed of by burial, shall first be thoroughly enveloped in unslaked lime.

Proper disposal shall be made by the owner of the animal or by the owner of the property on which the dead animal is found. Where the owner of the animal is unknown and the carcass is found upon any street, alley or other public place, it shall be removed and disposed of by the county board of health at public expense.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-120, filed 12/27/90, effective 1/31/91; Regulation .50.120, effective 3/11/60; subsection (2) amended by filing of 6/3/65.]

WAC 246-203-130 Keeping of animals. (1) Any person, firm or corporation is prohibited from keeping or sheltering animals in such a manner that a condition resulting from same shall constitute a nuisance.

(2) In populous districts, stable manure must be kept in a covered watertight pit or chamber and shall be removed at least once a week during the period from April 1st to October 1st and, during the other months, at intervals sufficiently frequent to maintain a sanitary condition satisfactory to the health officer. Manure on farms or isolated premises other than dairy farms need not be so protected and removed unless ordered by the health officer.

(3) Manure shall not be allowed to accumulate in any place where it can prejudicially affect any source of drinking water.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-130, filed 12/27/90, effective 1/31/91; Regulation .50.130, effective 3/11/60.]

WAC 246-203-160 Sanitation of public buildings. (1) **Definition.** A public building shall be construed to mean any theater, show-house, public hall, public meeting place, public transportation terminal, or any other public building not covered by specific regulations: Provided, That a public building shall not be construed to include any store, market, supermarket, or other commercial establishment open to the general public for commercial purposes which does not cater to an audience.

(2) **Lighting and ventilation.** All public buildings shall be properly lighted and ventilated according to the type of said building and the uses to which it is put.

(3) **Water supply.**

[Title 246 WAC—p. 167]

(a) Any public place supplied with water under pressure shall be equipped with sanitary drinking fountains of an approved type.

(b) Where water supplied for drinking is not obtained from a public water supply, such water shall be of a quality approved by the secretary of the department of health. When not under pressure, drinking water shall be stored in a covered container of an approved type.

(c) The use of the common drinking cup is prohibited.

(4) **Toilet facilities.** Every public building shall be provided with adequate sanitary toilet facilities for each of the sexes; and such facilities shall be convenient and accessible. Every public building which must provide adequate sanitary toilet facilities shall provide at least one free sanitary toilet facility for each of the sexes. Where toilet facilities are voluntarily provided by any store, market, supermarket, or other commercial establishment for use by customers of such establishment or the general public, there shall be at least one free sanitary toilet facility provided for each of the sexes. It shall be the duty of the owner, manager, or other responsible person in charge to see that the toilet system is properly installed and maintained in a usable and sanitary condition at all times.

The method of sewage disposal for all public buildings shall comply with the rules and regulations of the state board of health.

(5) **Cleaning.** All public buildings shall be kept at all times in a clean and sanitary condition and the cleaning shall be carried on under proper sanitary conditions. All rooms used for public meetings shall be cleaned after each meeting held in them, such cleaning to consist of thorough sweeping of the floors and wiping of the woodwork, together with proper airing of the rooms. No room shall be swept without the use of a proper dust-laying substance. Dry dusting is prohibited. In construing this regulation all meetings held during the course of a single day shall be regarded as one meeting.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-203-160, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-203-160, filed 12/27/90, effective 1/31/91; Order 98, § 248-50-160, filed 4/5/74; Order 89, § 248-50-160, filed 10/3/73; Regulation .50.160, effective 3/11/60.]

WAC 246-203-180 Piggeries. (1) No pigsty or piggery shall be built or maintained on marshy ground or land subject to overflow, nor within 200 feet of any stream or other source of water supply.

(2) When garbage is fed to pigs all unconsumed garbage shall be removed daily and disposed of by burial or incineration.

(3) No organic material furnishing food for flies shall be allowed to accumulate on the premises.

(4) All garbage shall be handled and fed upon platforms of concrete or other impervious material.

(5) Unslaked lime, hypochlorite of lime, borax or mineral oil shall be used daily in sufficient quantities to prevent offensive odors and the breeding of flies.

(6) All garbage, offal and flesh fed to swine must be sterilized by cooking before feeding.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-180, filed 12/27/90, effective 1/31/91; Order 44, § 248-50-180, filed 12/11/70; Regulation .50.180, effective 3/11/60.]

[Title 246 WAC—p. 168]

WAC 246-203-200 Disease producing organisms for rodent extermination forbidden. The use of any disease-producing organisms such as the so-called "rat viruses" or any bacteria for the purpose of rodent extermination is prohibited.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-200, filed 12/27/90, effective 1/31/91; Regulation .50.200, effective 3/11/60.]

WAC 246-203-210 Common drinking cups. No person, firm, corporation or authorities owning, in charge of, or in control of any hotel, theatre, restaurant, lodging house, factory, school, church, store, office building, railway, trolley or other public conveyance station, or public conveyance by land, water or air, or other institution or conveyance frequented by the public or which may be used for the purpose of public assembly or as a place of employment, is permitted to furnish any cup, vessel or other receptacle for common use in any such place for drinking or eating purposes.

The term "common use" in this section shall be construed to mean, for use by more than one person without adequate cleansing.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-203-210, filed 12/27/90, effective 1/31/91; Regulation .50.210, effective 3/11/60.]

Chapter 246-205 WAC

DECONTAMINATION OF ILLEGAL DRUG MANUFACTURING OR STORAGE SITES

WAC

246-205-001 Purpose and authority.
246-205-010 Definitions.

DECONTAMINATION CONTRACTOR CERTIFICATION

246-205-021 Training provider certification.
246-205-031 Basic training course content.
246-205-041 Refresher training course.
246-205-051 Certified training provider responsibilities.
246-205-061 Training provider certification renewal.
246-205-071 Worker and supervisor certification.
246-205-081 Worker and supervisor certification renewal.
246-205-091 Contractor certification.
246-205-101 Reciprocity.
246-205-111 Performance standards.
246-205-121 Denial, suspension, revocation of certification, and civil penalties.
246-205-131 Certified contractor list.

LOCAL HEALTH OFFICER RESPONSIBILITIES

246-205-510 Local health officer responsibilities.
246-205-520 Posting property.
246-205-530 Inspecting property.
246-205-531 Sampling procedures.
246-205-540 Determining contamination.
246-205-541 Decontamination standards.
246-205-550 Reporting contaminated property.
246-205-560 Notification of contaminated property.
246-205-570 Decontamination.
246-205-580 Verifying decontamination.
246-205-590 Recording decontamination.
246-205-990 Fees.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-205-020 Authorized contractor services. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-020, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.

(2003 Ed.)

- 246-205-030 Courses for training workers and supervisors. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-030, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-040 Training course approval. [Statutory Authority: RCW 64.44.060 and 64.44.070. 92-02-017 (Order 223SB), § 246-205-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-040, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-050 Worker and supervisor certification. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-050, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-060 Worker and supervisor certificate renewal. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-060, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-070 Authorized contractor certification. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-070, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-080 Reciprocity. [Statutory Authority: RCW 64.44.060 and 64.44.070. 92-02-017 (Order 223SB), § 246-205-080, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-080, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-090 On-site supervision. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-090, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-100 Performance standards. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-100, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-110 Denial, suspension, revocation of certification, and civil penalties. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-110, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.
- 246-205-120 Authorized contractor certification list. [Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-120, filed 1/24/91, effective 4/1/91.] Repealed by 03-02-022, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.44.070.

WAC 246-205-001 Purpose and authority. (1) This chapter is adopted to protect the public's health, safety, and welfare by establishing standards, procedures, and responsibilities for:

(a) The certification of contractors and their employees authorized to perform decontamination of illegal drug manufacturing or storage sites; and

(b) Regulating the occupancy and use of property where hazardous chemicals or chemical residues commonly associated with the manufacture of illegal drugs are or may be present.

(2) The statutory authority for the adoption of this chapter is chapter 64.44 RCW.

(a) Contractor certification rules are jointly adopted by the state board of health and the department of health; and

(b) Rules in this chapter pertaining to local health officers' responsibilities are adopted by the state board of health.

(3) This chapter does not apply to industrial sites where a person's manufacturing process uses a hazardous chemical when licensed or regulated by state or federal agencies.

[Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-001, filed 4/29/92, effective 5/30/92. Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-001, filed 1/24/91, effective 4/1/91.]

WAC 246-205-010 Definitions. For the purposes of this chapter, the following words and phrases shall have the following meanings unless the content clearly indicates otherwise.

"Authorized contractor" means any person or persons:

- Registered under chapter 18.27 RCW; and
- Certified by the department to decontaminate, demolish, or dispose of contaminated property as required by chapter 64.44 RCW and this chapter.

"Basic course" means a training course which has been sponsored or approved by the department for workers and supervisors who perform or supervise decontamination on illegal drug manufacturing or storage sites.

"Certificate" means a department issued written approval under this chapter.

"Certified" means a person who has department issued written approval under this chapter.

"Contaminated" or "contamination" means polluted by hazardous chemicals so that the property is unfit for human habitation or use due to immediate or long-term hazards. Property that at one time was contaminated, but has been satisfactorily decontaminated according to procedures established by the state board of health is not "contaminated."

"Decontamination" means the process of reducing levels of known contaminants to the lowest practical level using currently available methods and processes.

"Department" means the Washington state department of health.

"Disposal of contaminated property" means the disposition of contaminated property under the provisions of chapter 70.105 RCW.

"Hazardous chemicals" means the following substances used in the manufacture of illegal drugs:

- Hazardous substances as defined in RCW 70.105D.020; and
- Precursor substances as defined in RCW 69.43.010 which the state board of health, in consultation with the state board of pharmacy, has determined present an immediate or long-term health hazard to humans.

"Illegal drug manufacturing or storage site" means any property where a person illegally manufactures or stores a controlled substance or a law enforcement agency or the property owner believes a person illegally manufactured or stored a controlled substance.

"Initial site assessment" means the first evaluation of a property to determine the nature and extent of observable damage and contamination.

"List of contaminated properties" means a list of properties contaminated by illegal drug manufacturing or the storage of hazardous chemicals.

"Local department" means the jurisdictional local health department or district.

"Local health officer" means a health officer or authorized representative as defined under chapters 70.05, 70.08, and 70.46 RCW.

"Person" means an individual, firm, association, copartnership, political subdivision, government agency, municipality, industry, public or private corporation, or other entity.

"Posting" means attaching a written or printed announcement conspicuously on property which may be, or is determined to be, contaminated by illegal drug manufacturing or the storage of a hazardous chemical.

"Property" means any site, lot, parcel of land, structure, or part of a structure involved in the illegal manufacture of a drug or storage of a hazardous chemical including, but not limited to:

- Single-family residences;
- Units or multiplexes;
- Condominiums;
- Apartment buildings;
- Motels and hotels;
- Boats;
- Motor vehicles;
- Trailers;
- Manufactured housing;
- Any ship, booth, or garden; or
- Any site, lot, parcel of land, structure, or part of a structure that may be contaminated by previous use.

"Property owner" means a person with a lawful right of possession of the property by reason of obtaining it by purchase, exchange, gift, lease, inheritance, or legal action.

"Refresher course" means a department sponsored or approved biennial training course for decontamination workers and supervisors. An approved refresher course:

- Reviews the subjects taught in the initial training course; and
- Includes updated information on emerging decontamination technology.

"Storage site" means any property used for the storage of hazardous chemicals or illegally manufactured controlled substances.

"Supervisor" means a person certified by the department and employed by an authorized contractor who is on site during the decontamination of an illegal drug manufacturing or storage site and who is responsible for the activities performed.

"Worker" means a person certified by the department and employed by an authorized contractor who performs decontamination of an illegal drug manufacturing or storage site.

"Warning" means a sign posted by the local health officer conspicuously on the site of an illegal drug manufacturing or storage site informing potential occupants that hazardous chemicals may exist on, or have been removed from, the premises and that entry is unsafe.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-010, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-010, filed 4/29/92, effective 5/30/92. Statutory Authority: RCW 64.44.060 and 64.44.070. 92-02-017 (Order 223SB), § 246-205-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 64.44.060 and chapter 64.44

[Title 246 WAC—p. 170]

RCW. 91-04-007 (Order 125SB), § 246-205-010, filed 1/24/91, effective 4/1/91.]

DECONTAMINATION CONTRACTOR CERTIFICATION

WAC 246-205-021 Training provider certification.

(1) Persons wanting to become an illegal drug lab decontamination training provider must obtain department approval of instructors and courses. The types of drug lab decontamination courses that may be approved by the department are:

- (a) Basic worker;
- (b) Basic supervisor; and
- (c) Refresher worker and supervisor.

(2) To obtain approval of instructors, the applicant must demonstrate that the person has the breadth of knowledge and experience necessary to properly train workers and supervisors.

(3) To obtain approval of course work, the applicant must demonstrate the:

- (a) Adequacy and accuracy of content; and
- (b) Adequacy of training techniques.

(4) Applicants for training provider certification shall:

- (a) Submit a completed training provider application as specified under subsection (5) of this section;
- (b) Submit the required fee as specified under WAC 246-205-990; and

(c) Ensure the department receives the application sixty or more days before the requested approval date.

(5) A training provider application includes, but is not limited to:

- (a) A completed training provider application form provided by the department;
- (b) A list of all personnel involved in course presentation and a description of their qualifications;
- (c) A detailed description of course content and the amount of time allotted to each major topic;
- (d) A description of teaching methods;
- (e) A list of questions for development of an examination; and

(f) Copies of all materials proposed for use, when requested from the department.

(6) Training provider certification is valid for two years from the date of issuance.

(7) Training provider certification may be terminated if the training provider fails to:

- (a) Maintain the course content and quality as approved by the department; and
- (b) Make changes to a course as required by the department.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-021, filed 12/23/02, effective 1/23/03.]

WAC 246-205-031 Basic training course content.

Department approved basic worker and supervisor training courses shall provide at a minimum:

(1) Information on state and federal laws, rules, and regulations applicable to illegal drug manufacturing or storage sites including, but not limited to, Contaminated properties, chapter 64.44 RCW; Precursor drugs, chapter 69.43 RCW;

(2003 Ed.)

Uniform Controlled Substances Act, chapter 69.50 RCW; Washington Industrial Safety and Health Act, chapter 49.17 RCW; the Federal Occupational Health and Safety Act, 29 U.S.C. 651 et seq.; and this chapter.

(2) Chemical terminology, classifications, and properties related to illegal drug manufacturing.

(3) Illegal drug laboratory characteristics.

(4) First aid.

(5) Adverse health effects of exposure related to illegal drug manufacturing including, but not limited to:

(a) Toxicology; and

(b) Symptomology.

(6) Incompatibility of chemicals related to decontamination.

(7) Techniques and equipment used for decontamination of property.

(8) Handling unknown substances.

(9) State and federal requirements for dealing with hazardous materials including, but not limited to, chapter 173-303 WAC related to:

(a) Disposal;

(b) Transportation;

(c) Storage; and

(d) Reporting.

(10) Training for supervisors must also include, but not be limited to:

(a) Obtaining necessary information for making site assessments;

(b) Initial site assessment;

(c) Initial site sampling;

(d) Work plan development;

(e) Final site sampling;

(f) Report completion; and

(g) Penalties and liabilities.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-031, filed 12/23/02, effective 1/23/03.]

WAC 246-205-041 Refresher training course. (1) A refresher training course is required every two years for workers and supervisors.

(2) Department approved refresher worker and supervisor training courses shall provide at a minimum:

(a) A thorough review of the subjects required under WAC 246-205-031;

(b) An update of information on state-of-the-art procedures and equipment;

(c) A review of regulatory changes and interpretation; and

(d) Other subjects if required by the department to update information on new technology and procedures.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-041, filed 12/23/02, effective 1/23/03.]

WAC 246-205-051 Certified training provider responsibilities. (1) Prior to any training, the training provider shall:

(a) Notify the department in writing thirty or more days before training is scheduled to begin. The notification shall include the date, time, and address of the location where training will be conducted;

(2003 Ed.)

(b) Ensure that the size of the class is appropriate for learning the course content;

(c) Incorporate into training any required subject matter developed by the department;

(d) Obtain department approval in advance of any changes to the training; and

(e) Maintain the course content and quality as approved by the department.

(2) When requested by the department, the training provider shall confirm successful completion of CDL worker or supervisor training courses by applicants seeking CDL worker or supervisor certification.

(3) At the department's request, the training provider shall allow a department representative to attend a training course as an observer to verify that the training provider conducts the training in accordance with the training approved by the department.

(4) Training providers conducting training outside the state of Washington shall:

(a) Reimburse the department at current state of Washington per diem and travel allowance rates for travel expenses associated with department observance of the training courses; and

(b) Submit reimbursement to the department within thirty days of receipt of the billing notice.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-051, filed 12/23/02, effective 1/23/03.]

WAC 246-205-061 Training provider certification renewal. Training providers seeking renewal certification shall submit the following to the department thirty or more days before expiration of the current certificate:

(1) A completed training provider application as described in WAC 246-205-021(5); and

(2) A fee as prescribed in WAC 246-205-990.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-061, filed 12/23/02, effective 1/23/03.]

WAC 246-205-071 Worker and supervisor certification.

(1) Applicants seeking certification as a decontamination worker shall ensure the department receives the following within sixty days of completing the basic worker course:

(a) A completed decontamination worker application;

(b) A fee as prescribed in WAC 246-205-990;

(c) Evidence of satisfying the requirements of WAC 296-62-30410;

(d) Evidence of successful completion of a department sponsored or approved basic decontamination worker course; and

(e) Evidence of passing the basic decontamination worker examination administered by the department with a score of seventy percent or higher.

(2) Applicants seeking certification as a decontamination supervisor shall ensure the department receives the following within sixty days of completing the basic supervisor course:

(a) A completed decontamination supervisor application;

(b) A fee as prescribed in WAC 246-205-990;

(c) Evidence of a valid Washington state decontamination worker certificate;

[Title 246 WAC—p. 171]

(d) Evidence of forty or more hours of on-site experience in hazardous material or illegal drug manufacturing or storage site decontamination projects;

(e) Evidence of satisfying the requirements of WAC 296-62-30415.

(f) Evidence of successful completion of a department sponsored or approved basic decontamination supervisor course; and

(g) Evidence of passing the basic decontamination supervisor examination administered by the department with a score of seventy percent or higher.

(3) Applicants for decontamination supervisor certification who can demonstrate that their work experience and training has resulted in experience and training equivalent to the requirements in WAC 246-205-031 and 246-205-071 (1)(c) and (2)(c), (d), and (e) may be certified as a CDL supervisor when they apply prior to May 1, 2003.

(a) For purposes of this subsection, an application includes:

(i) A completed decontamination supervisor application form;

(ii) A fee as prescribed in WAC 246-205-990; and

(iii) Evidence of meeting the requirements of this subsection.

(b) All other decontamination supervisor certification requirements of this chapter apply.

(4) Worker and supervisor certificates are valid for two years from the date of issuance.

(5) Workers and supervisors shall make certificates available for inspection at all times during an illegal drug manufacturing or storage site decontamination project.

(6) The certificate may be denied, suspended, or revoked as described in WAC 246-205-121.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-071, filed 12/23/02, effective 1/23/03.]

WAC 246-205-081 Worker and supervisor certification renewal. (1) Worker and supervisor certification is valid for two years from the date of issuance.

(2) Certified workers and supervisors seeking certificate renewal shall submit to the department thirty or more days before expiration of the current certificate:

(a) A completed application form for certificate renewal;

(b) A fee prescribed in WAC 246-205-990; and

(c) Evidence of successful completion of a department sponsored or approved refresher training course.

(3) If a previously certified worker applies for certification following expiration of the previous certificate, but less than two years after expiration of the previous certificate, the worker shall:

(a) Submit to the department a completed application form for certificate renewal;

(b) Submit to the department a fee prescribed in WAC 246-205-990; and

(c) Retake the entire basic worker course.

(4) If a previously certified supervisor applies for certification following expiration of the previous certificate, but less than two years after expiration of the previous certificate, the supervisor shall:

(a) Submit to the department a completed application form for certificate renewal;

(b) Submit to the department a fee prescribed in WAC 246-205-990; and

(c) Retake the entire basic supervisor course.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-081, filed 12/23/02, effective 1/23/03.]

WAC 246-205-091 Contractor certification. (1) A contractor may advertise, offer to undertake, or perform decontamination, demolition, or disposal work at an illegal drug manufacturing or storage site only after securing a certificate from the department.

(2) Applicants for department certification as an authorized contractor, shall submit to the department:

(a) Evidence of being licensed, bonded, and insured as a general contractor under the provisions of chapter 18.27 RCW;

(b) Evidence of department certification for each employee who will do work on an illegal drug manufacturing or storage site;

(c) Documentation that the contractor has at least one department certified supervisor and one department certified worker;

(d) A completed decontamination contractor application form; and

(e) A fee as prescribed in WAC 246-205-990.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-091, filed 12/23/02, effective 1/23/03.]

WAC 246-205-101 Reciprocity. (1) The department may provide reciprocal certification for contractors, supervisors, and workers trained and certified in another state if standards and training are substantially equivalent to those of this chapter.

(2) Applicants for reciprocity shall submit to the department:

(a) A completed application form for the type of certification being requested;

(b) Documentation of specialized training for illegal drug manufacturing or storage site decontamination;

(c) Evidence of successful completion of training required by the Federal Occupational Safety and Health Act, 29 U.S.C. 651 et seq.; Washington Industrial Safety and Health Act regulations, chapter 49.17 RCW; and

(d) A fee as prescribed in WAC 246-205-990.

(3) Prior to certificate approval, the applicant may be required to:

(a) Submit additional information;

(b) Successfully complete a refresher course; or

(c) Pass a department-administered examination with a score of seventy percent or more.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-101, filed 12/23/02, effective 1/23/03.]

WAC 246-205-111 Performance standards. Authorized contractors, including workers and supervisors, working at a decontamination site shall, at a minimum:

(1) Perform all decontamination work only with department certified workers and supervisors;

(2) File a work plan with and obtain approval from the local health department;

(3) Perform work in accordance with the approved work plan;

(4) Station on site a contractor-employed certified supervisor to oversee the activities performed;

(5) Perform work meeting applicable requirements of state and local building codes;

(6) Comply with applicable Federal Occupational Safety and Health Act, Public Law 91-596, 84 stat. 1590; and Washington Industrial Safety and Health Act regulations and requirements, chapter 49.17 RCW;

(7) Comply with applicable requirements of chapter 70.105 RCW, Hazardous waste management; and chapter 173-303 WAC, Dangerous waste regulations;

(8) Comply with applicable requirements of department of ecology and Environmental Protection Agency regulations;

(9) Comply with applicable contractor regulations;

(10) Notify the state and local jurisdictional health department of all work performed within ten days after completion of the project;

(11) Comply with all other applicable laws and regulations; and

(12) Comply with this chapter.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-111, filed 12/23/02, effective 1/23/03.]

WAC 246-205-121 Denial, suspension, revocation of certification, and civil penalties. (1) An initial, renewal, or reciprocal illegal drug manufacturing or storage site decontamination worker, supervisor, or contractor certificate will be denied when an applicant fails to meet the requirements of WAC 246-205-071, 246-205-081, 246-205-091 or 246-205-101.

(2) Disciplinary action against a decontamination worker, supervisor, or contractor may be taken for failing to comply with the requirements of chapter 64.44 RCW, or any rule adopted under chapter 64.44 RCW. Disciplinary action may be taken on any of the following grounds:

(a) Failing to perform decontamination, demolition, or disposal work under the supervision of trained personnel;

(b) Failing to file a work plan;

(c) Failing to perform work pursuant to the work plan;

(d) Failing to perform work that meets the requirements of the department;

(e) Obtaining a certificate by error, fraud, or misrepresentation; or

(f) If the person has been certified pursuant to RCW 74.20A.320 by the department of social and health services as a person who is not in compliance with a support order or a residential or visitation order. If the person has continued to meet all other requirements for reinstatement during the suspension, reissuance of the license or certificate shall be automatic upon the department's receipt of a release issued by the department of social and health services stating that the person is in compliance with the order.

(3) Disciplinary action against a decontamination worker, supervisor, or contractor may include, but not be limited to, denial, suspension, or revocation of certification.

(2003 Ed.)

(4) A contractor may be assessed a civil penalty not to exceed five hundred dollars for each violation in addition to certification denial, suspension, or revocation pursuant to this rule. Each day the violation continues shall be considered a separate violation.

(5) Adjudicative proceedings are governed by chapter 34.05 RCW, the Administrative Procedure Act; chapter 246-10 WAC; and this chapter.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-121, filed 12/23/02, effective 1/23/03.]

WAC 246-205-131 Certified contractor list. (1) The department shall maintain a list of authorized illegal drug manufacturing or storage site decontamination contractors.

(2) The department's authorized contractor list shall be made available to local health officials and other appropriate agencies semiannually, and to the public upon request.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-131, filed 12/23/02, effective 1/23/03.]

LOCAL HEALTH OFFICER RESPONSIBILITIES

WAC 246-205-510 Local health officer responsibilities. As required by chapter 64.44 RCW, the local health officer's responsibilities shall include, but not be limited to:

(1) Posting property;

(2) Inspecting property;

(3) Determining contamination;

(4) Reporting contaminated property;

(5) Notification of contaminated property;

(6) Determining whether a contractor is required for decontamination;

(7) Verifying decontamination; and

(8) Recording decontamination.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-510, filed 12/23/02, effective 1/23/03.]

WAC 246-205-520 Posting property. (1) Within one working day of notification from a law enforcement agency of potential contamination, the local health officer shall post a written warning on the premises. The warning shall inform potential occupants that hazardous chemicals may exist on, or have been removed from the property and that entry is unsafe.

(2) Within fourteen days of notification, the local health officer shall inspect the property.

(3) If the property is contaminated, the local health officer shall post a written notice on the premises declaring that the officer intends to issue an order prohibiting use of the property as long as the property is contaminated.

(4) Within ten working days of determining the property is contaminated, the local health officer shall cause to be served an order prohibiting use as required under WAC 246-205-560.

(5) Within one working day of issuance of the order, the local health officer shall post the order in a conspicuous place on the property.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-520, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070

[64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-520, filed 4/29/92, effective 5/30/92.]

WAC 246-205-530 Inspecting property. Within fourteen days after a law enforcement agency or property owner notifies the local health officer of potential property contamination, the local health officer shall inspect the property.

(1) To enable the local health officer to determine contamination, the property inspection shall include, but not be limited to, an acquisition of data such as evidence of:

- (a) Hazardous chemical use or storage on site;
- (b) Chemical stains;
- (c) Release or spillage of hazardous chemicals on the property; or
- (d) Glassware or other paraphernalia associated with the manufacture of illegal drugs on site.

(2) As part of the property's inspection, the local health officer may request copies of any law enforcement reports, forensic chemist reports, and any department of ecology hazardous material transportation manifests needed to evaluate:

- (a) The length of time the property was used as an illegal drug manufacturing or storage site;
- (b) The size of the site actually used for the manufacture or storage of illegal drugs;
- (c) What chemical process was involved in the manufacture of illegal drugs;
- (d) What chemicals were removed from the scene; and
- (e) The location of the illegal drug manufacturing or storage site in relation to the habitable areas of the property.

(3) The local health officer may coordinate the property's inspection with other appropriate agencies. At the request of the local health officer, the Washington state department of ecology may conduct an environmental assessment and may sample the property's ground water, surface water, septic tank water, soil, and other media as necessary to enable the local health officer to evaluate the long-term public health threats.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-530, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-530, filed 4/29/92, effective 5/30/92.]

WAC 246-205-531 Sampling procedures. (1) The analytical results obtained through sampling may be used as a method to determine contamination. Types of sample collection include, but are not limited to:

- (a) Nonporous surface;
- (b) Porous surface;
- (c) Air;
- (d) Drinking water;
- (e) Ground water;
- (f) Surface water;
- (g) Soil; and
- (h) Septic system.

(2) Collection of samples shall be performed by department of ecology staff; department of health certified CDL supervisors; or local health officers using:

- (a) Standards and protocols to ensure accuracy and the ability to produce similar results with repeated sampling;
- (b) Proper swabbing techniques to collect a representative sample of the area being sampled; and

(c) Proper care and prudent action to avoid contamination during sampling.

(3) All samples collected, transported, stored, and analyzed under the provisions of this section must be secured to assure an unbroken chain-of-custody as described in the American Society of Testing Materials Standard D 4840.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-531, filed 12/23/02, effective 1/23/03.]

WAC 246-205-540 Determining contamination. (1) The local health officer shall make a determination of contamination when the inspection reveals the property is contaminated.

(2) If designated contaminated, the local health officer shall post and cause to be served an order prohibiting use of all or portions of the property as required under WAC 246-205-520 and 246-205-560.

(3) If the local health officer determines the property is not contaminated, the local health officer shall document the findings. The local health officer's documentation shall include:

- (a) Findings;
- (b) Conclusions;
- (c) Name of the property owner;
- (d) Mailing and street address of the property owner;
- (e) Parcel identification number and legal description of the property; and
- (f) Clear directions for locating the property.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-540, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-540, filed 4/29/92, effective 5/30/92.]

WAC 246-205-541 Decontamination standards. The decontamination standards include:

- (1) Methamphetamine of less than or equal to 0.1 micro grams per 100 square centimeters;
- (2) Total lead of less than or equal to 20 micro grams per square foot;
- (3) Mercury of less than or equal to 50 nano grams per cubic meter in air; and
- (4) Volatile organic compounds (VOCs) of 1 part per million total hydrocarbons and VOCs in air.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-541, filed 12/23/02, effective 1/23/03.]

WAC 246-205-550 Reporting contaminated property. (1) When property is determined contaminated, the local health officer shall report the contaminated property to the state department of health:

- (a) By telephone or e-mail within one working day; and
 - (b) In writing within ten working days.
- (2) The local health officer's written contamination report to the state department of health shall include:
- (a) Description of the findings;
 - (b) Conclusions;
 - (c) Name of the property owner;
 - (d) Mailing and street address, including zip code and county, of the property owner;

- (e) Parcel identification number and legal description of the property to including township and section;
- (f) Tax account number; and
- (g) Date property determined contaminated.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-550, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-550, filed 4/29/92, effective 5/30/92.]

WAC 246-205-560 Notification of contaminated property. (1) Within ten working days after the local health officer's determination that a property is contaminated, the local health officer shall cause to be served, either personally or by certified mail, return receipt requested, an order prohibiting use to all known:

- (a) Occupants; and
- (b) Persons having an interest in the property as shown upon the records of the auditor's office of the county in which the property is located.

(2) If the whereabouts of persons described under subsection (1) of this section is unknown and the same cannot be ascertained by the local health officer in the exercise of reasonable diligence, and the health officer makes an affidavit to that effect, then the serving of the order upon such persons may be made by:

- (a) Personal service; or
- (b) Mailing a copy of the order by certified mail, postage prepaid, return receipt requested:
 - (i) To each person at the address appearing on the last equalized tax assessment roll of the county where the property is located; or
 - (ii) At the address known to the county assessor.

(3) The local health officer shall also mail a copy of the order addressed to each person or party having a recorded right, title, estate, lien, or interest in the property.

(4) The local health officer's order shall:

- (a) Describe the local health officer's intended course of action;
- (b) Describe the penalties for noncompliance with the order;
- (c) Prohibit use of all or portions of the property as long as the property is contaminated;
- (d) Describe what measures a property owner must take to have the property decontaminated; and
- (e) Indicate the potential health risks involved.

(5) The local health officer shall:

- (a) File a copy of the order prohibiting use of the property with the county auditor;
- (b) Provide a copy of the order to the local building or code enforcement department; and
- (c) Post the order in a conspicuous place on the property within one working day of issuance of the order.

(6) The local health officer's order shall advise that:

- (a) A hearing before the local health officer or local health board shall be held upon the request of a person required to be notified of the order;
- (b) The person's request for a hearing shall be made within ten days of the local health officer's serving of the order;

(2003 Ed.)

- (c) The hearing shall be held not less than twenty days nor more than thirty days after the serving of the order; and
- (d) In any hearing concerning whether property is contaminated, the property owner has the burden of showing that the property is decontaminated and meets the decontamination standards of WAC 246-205-541.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-560, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-560, filed 4/29/92, effective 5/30/92.]

WAC 246-205-570 Decontamination. (1) An owner of contaminated property who desires to reduce the contamination shall use the services of an authorized contractor unless otherwise authorized by the local health officer.

(2) The local health officer shall provide the property owner with a list of authorized contractors upon request.

(3) When an authorized contractor is required for decontamination, the property owner shall have a written work plan approved by the local health officer before starting decontamination.

(4) When an authorized contractor is required for decontamination, the contractor shall prepare the work plan in accordance with this chapter and chapter 64.44 RCW. When the local health officer determines the services of an authorized contractor are not necessary, the local health officer shall take appropriate measures to ensure the property is decontaminated consistent with the purposes of chapter 64.44 RCW.

(5) The property owner or the contractor shall decontaminate the property according to the approved work plan and to meet the decontamination standards described in WAC 246-205-541.

(6) The property owner shall be responsible for:

- (a) The costs of any property testing which may be required to demonstrate the presence or absence of hazardous chemicals;
- (b) The costs of the property's decontamination and disposal expenses, as well as costs incurred by the local health officer resulting from the enforcement of this chapter;
- (c) Keeping records documenting decontamination procedures and submitting notarized copies of all records to the local health officer; and

(d) Petitioning the local health officer to review the decontamination records and to declare the property decontaminated.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-570, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-570, filed 4/29/92, effective 5/30/92.]

WAC 246-205-580 Verifying decontamination. Within ten working days of a request for review of decontamination records, the local health officer:

- (1) Shall review the documentation to verify decontamination was performed according to the approved work plan and the applicable decontamination standards in WAC 246-205-541 are met;
- (2) May visit the property site to assess the thoroughness of the decontamination;

(3) May require the property owner to provide more extensive testing and assessment of the property site by an independent laboratory or firm qualified to perform such testing and assessment.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-580, filed 12/23/02, effective 1/23/03. Statutory Authority: RCW 64.40.070 [64.44.070] and chapter 64.44 RCW. 92-10-027 (Order 268B), § 246-205-580, filed 4/29/92, effective 5/30/92.]

WAC 246-205-590 Recording decontamination. If, after review of the information in WAC 246-205-580, the local health officer determines the property has been decontaminated, the local health officer shall within ten working days:

(1) Record a release for reuse document in the real property records of the county auditor where the property is located indicating that to the best of his or her knowledge, the property was decontaminated in accordance with this chapter.

(2) Send a copy of the release to the property owner.

(3) Send a copy of the release to the state department of health.

(4) Send a copy of the release to the local building or code enforcement department.

[Statutory Authority: RCW 64.44.070. 03-02-022, § 246-205-590, filed 12/23/02, effective 1/23/03.]

WAC 246-205-990 Fees. (1) The department shall charge fees for issuance and renewal of certificates. The department shall set the fees by rule.

(2) The fees shall cover the cost of issuing certificates, filing papers and notices, and administering this chapter. The costs shall include reproduction, travel, per diem, and administrative and legal support costs.

(3) Fees are nonrefundable and shall be in the form of check or money order made payable to the department.

(4) The department shall require payment of the following fees upon receipt of application:

(a) Twenty-eight dollars shall be assessed for each initial, renewal, or reciprocal worker certificate application.

(b) Twenty-eight dollars shall be assessed for each initial, renewal, or reciprocal supervisor certificate application.

(c) Five hundred fifty-two dollars shall be assessed for each initial, renewal, or reciprocal authorized contractor certificate application. The applicant's certificate shall expire annually on the expiration date of the contractor's license issued under the provisions of chapter 18.27 RCW.

(d) Two hundred eleven dollars shall be assessed for each initial application and fifty-one dollars shall be assessed for each renewal application for illegal drug manufacturing or storage site decontamination training course approval.

[Statutory Authority: RCW 43.70.250, 70.90.150, and 43.20B.250. 01-14-047, § 246-205-990, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 43.70.250. 00-02-016, § 246-205-990, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-205-990, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 64.44.060 and chapter 64.44 RCW. 91-04-007 (Order 125SB), § 246-205-990, filed 1/24/91, effective 4/1/91.]

[Title 246 WAC—p. 176]

Chapter 246-215 WAC

FOOD SERVICE

WAC

246-215-001	Purpose and authority.
246-215-010	Definitions.
246-215-020	Food supplies.
246-215-030	Food protection.
246-215-040	Public health labeling.
246-215-050	Food preparation.
246-215-060	Modified atmosphere packaging.
246-215-070	Temperature control.
246-215-080	Personal hygiene.
246-215-090	Sanitary design, construction, and installation of equipment and utensils.
246-215-100	Equipment and utensil cleaning and sanitizing.
246-215-110	Poisonous or toxic materials.
246-215-120	Sanitary facilities and controls.
246-215-130	Garbage, rubbish, and litter.
246-215-140	Pests and pest control.
246-215-150	Construction and maintenance of physical facilities.
246-215-160	Mobile food units.
246-215-170	Customer self-service of food and bulk food dispensing.
246-215-180	Bed and breakfast food service operations.
246-215-190	Temporary food service establishments.
246-215-200	Permits required, suspension, revocation, enforcement.
246-215-210	Service of notices.
246-215-220	Hearings.
246-215-230	Inspections and investigations.
246-215-240	Examination, hold orders, condemnation, and destruction of food.
246-215-250	Review of plans and menu.
246-215-260	Procedure when disease transmission is suspected.
246-215-270	Variance clause.
246-215-280	Interpretation.
246-215-290	Separability clause.
246-215-300	Penalty clause.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-215-009	Definitions. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-009, filed 12/27/90, effective 1/31/91; 84-14-090 (Order 274), § 248-84-002, filed 7/3/84; 80-14-059 (Order 203), § 248-84-002, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
246-215-019	Food supplies. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-019, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-010, filed 10/1/80; Regulation .84.010, filed 6/4/63; Regulation .84.010, effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
246-215-029	Food protection and storage. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-029, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-015, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
246-215-039	Food preparation, display, service and transportation. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-039, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-020, filed 10/1/80; Regulation .84.020, filed 6/4/63; Regulation .84.020, effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
246-215-049	Personnel. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-049, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-025, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
246-215-059	Sanitary design, construction, and installation of equipment and utensils. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-059, filed 12/27/90, effective 1/31/91; 84-14-090 (Order 274), § 248-84-030, filed 7/3/84; 80-14-059 (Order 203), § 248-84-030, filed 10/1/80; Regulation .84.030, filed 6/4/63; Regulation .84.030 effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed

(2003 Ed.)

- 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-069 Equipment and utensil cleaning and sanitation. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-069, filed 12/27/90, effective 1/31/91; 84-14-090 (Order 274), § 248-84-035, filed 7/3/84; 80-14-059 (Order 203), § 248-84-035, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-079 Sanitary facilities and controls. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-079, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-040, filed 10/1/80; Regulation .84.040, filed 6/4/63; Regulation .84.040, effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-089 Garbage and rubbish. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-089, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-045, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-099 Insect and rodent control. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-099, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-050, filed 10/1/80; Regulation .84.050, filed 6/4/63; Regulation .84.050, effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-109 Construction and maintenance of physical facilities. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-109, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-055, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-119 Mobile units. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-119, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-060, filed 10/1/80; Regulation .84.060, filed 6/4/63; Rules (part), effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-129 Bulk foods, storage, and display. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-129, filed 12/27/90, effective 1/31/91; 84-14-090 (Order 274), § 248-84-062, filed 7/3/84.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-139 Temporary food service establishments. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-139, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-065, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-149 Permits required, suspension and revocation procedures. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-149, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-070, filed 10/1/80; Regulation .84.070 (part), filed 6/4/63; Rules (part), effective 3/11/60.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-159 Service of notices. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-159, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-075, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-169 Hearings. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-169, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-080, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-179 Inspections. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-179, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-085, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-189 Examination—Hold orders—Condemnation—Destruction of food. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-189, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-090, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-199 Review of plans. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-199, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-095, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-209 Procedure when infection is suspected. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-209, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-100, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-219 Variance clause. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-219, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-105, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-229 Interpretation. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-229, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-110, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-239 Sulfiting agents. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-239, filed 12/27/90, effective 1/31/91; 85-11-024 (Order 288), § 248-84-120, filed 5/13/85.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-500 Separability clause. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-500, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-500, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.
- 246-215-900 Penalty clause. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-215-900, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-900, filed 10/1/80.] Repealed by 92-08-112 (Order 261B), filed 4/1/92, effective 5/2/92. Statutory Authority: RCW 43.20.050.

WAC 246-215-001 Purpose and authority. The purpose of chapter 246-215 WAC is to establish state board of health standards for food service under RCW 43.20.050 to promote and protect the health, safety, and well-being of the public and prevent the spread of disease by food.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-001, filed 4/1/92, effective 5/2/92; 91-02-051 (Order 124B), recodified as § 246-215-001, filed 12/27/90, effective 1/31/91; 80-14-059 (Order 203), § 248-84-001, filed 10/1/80; Regulation .84.001, filed 6/4/63; Regulation .84.001, effective 3/11/60.]

WAC 246-215-010 Definitions. (1) "Abbreviations":

- (a) "FDA" means United States Food and Drug Administration.
- (b) "HACCP" means hazard analysis, critical control point.
- (c) "PPM" means parts per million.
- (d) "USA" means United States of America.
- (e) "USDA" means United States Department of Agriculture.
- (f) "WSDA" means Washington state department of agriculture.

(2) "Adulterated" means the altered condition of food including:

(a) Bearing or containing any poisonous or deleterious substance in a quantity rendering food injurious to health;

(b) Bearing or containing any added poisonous or deleterious substance where no safe tolerance has been established by regulation, or exceeding such tolerance if one has been established;

(c) Consisting in whole or in part of any filthy, putrid, or decomposed substance, or otherwise being unfit for human consumption;

(d) Processing, preparing, packing, or holding potentially hazardous foods under improper time-temperature conditions or under other conditions increasing the probability of food contamination with excessive microorganisms or physical contaminants;

(e) Processing, preparing, packing, or holding food under insanitary conditions increasing the probability of food contamination or cross-contamination;

(f) Holding or packaging food in containers composed, in whole or in part, of any poisonous or deleterious substance rendering the contents potentially injurious to health; or

(g) Containing any product of a diseased animal, or an animal dying by means other than by slaughter, except as permitted under WAC 246-215-020(6).

(3) "Approved" means acceptable to the health officer based on his/her determination regarding conformance with appropriate standards and public health practice.

(4) "Approved source" means foods which are obtained by the food service establishment owner from persons who comply with applicable federal, state and local laws, ordinances and regulations.

(5) "Aquatic foods" means foods grown in or harvested from water, including all types of fish, shellfish and mollusks, edible crustacea, reptiles, amphibians, and mixtures containing aquatic foods and synthetic foods, such as surimi.

(6) "Base of operation" means an approved site for servicing, cleaning, sanitizing, supplying, and maintaining a mobile food unit.

(7) "Bed and breakfast" means a private home or inn offering lodging on a temporary basis to travelers, tourists, and transient guests which provides food service only to registered guests.

(8) "Bulk food" means processed or unprocessed food in containers where consumers withdraw desired quantities.

(9) "Caterer" means a person or food service establishment contracted to prepare food in an approved facility for final cooking or service at another location.

(10) "Commissary" means an approved food service establishment where food is stored, prepared, portioned, or packaged for service elsewhere.

(11) "Corrosion-resistant" means a material maintaining original surface characteristics under prolonged contact with food, cleaning compounds, or sanitizing solutions.

(12) "Critical control point" means a location where exercising a preventive measure or procedure eliminates, prevents, or minimizes a hazard or hazards from occurring after that point.

(13) "Cross-contamination" means the process where disease causing organisms are transferred from raw or other foods to equipment or ready-to-eat foods.

(14) "Department" means the Washington state department of health.

(15) "Durable" means capable of withstanding expected use and remaining easily cleanable.

(16) "Easily cleanable" means readily accessible with materials and finish fabricated to permit complete removal of residue by normal cleaning methods.

(17) "Equipment" means all stoves, ovens, ranges, hoods, slicers, mixers, meat blocks, tables, counters, refrigerators, sinks, dish machines, steam tables, and similar items used in the operation of a food service establishment.

(18) "Extensive remodel" means construction in a food service establishment requiring a building permit or plumbing permit, except for signs and fences.

(19) "Food" means any raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale, in whole or in part, for human consumption.

(20) "Food additive" means substances added directly or indirectly to food.

(21) "Food contact surfaces" means those surfaces of equipment and utensils normally contacting food, and those surfaces where food may drain, drip, or splash back onto surfaces normally in contact with food.

(22) "Food service establishment" means:

(a) A place, location, operation, site, or facility where food is manufactured, prepared, processed, packaged, dispensed, distributed, sold, served, or offered to the consumer regardless of whether or not compensation for food occurs, including but not limited to:

(i) Restaurants, snack bars, cafeterias, taverns, bars;

(ii) Retail food stores, supermarkets, retail meat markets, retail fish markets, retail bakeries, delicatessens;

(iii) Institutional operations licensed by the department or local health officer, such as schools, hospitals, jails, prisons, and child care facilities;

(iv) Central preparation sites, including caterers;

(v) Satellite servicing locations;

(vi) Temporary food service establishments or mobile food units;

(vii) Bed and breakfast operations;

(viii) Remote feeding sites; and

(ix) Vending machines dispensing potentially hazardous foods.

(b) Except for the following:

(i) Private homes where food is prepared or served for consumption by household members and/or their guests;

(ii) Establishments offering only commercially prepackaged nonpotentially hazardous foods;

(iii) Commercial food processing establishments, licensed and regulated by the USDA, FDA, or WSDA; and

(iv) Farmers exempt from licensure under RCW 36.71-090.

(23) "Food service worker" means the permit holder, an individual having supervisory or management duties, and any other person working in a food service establishment.

(24) "Frozen" means the condition of a food when it is continuously stored at or below 10° F.

(25) "Game meat" means warm-blooded and cold-blooded animals, excluding fish and meat food animals as defined by USDA, noncommercially raised and processed without continuous regulatory surveillance, including, but not limited to:

(a) Mammals such as deer, elk, antelope, buffalo, and bear;

(b) Birds; and

(c) Reptiles such as alligator.

(26) "Hazard analysis critical control point (HACCP)" means a method used to reduce the risk of foodborne illness by:

(a) Identifying hazards of high risk foods;

(b) Assessing the hazards posed by each preparation step;

(c) Determining the critical points for controlling hazards;

(d) Monitoring a critical control point or points; and

(e) Implementing immediate and appropriate corrective action when control criteria are not met.

(27) "Health officer" means the city, county, city-county, or district health officer defined under RCW 70.05.010(2), or his/her authorized representative, or the representative of the department.

(28) "Hermetically sealed container" means a properly designed container, intended to keep the contents free of contamination by microorganisms and to maintain the commercial sterility of its contents after thermal processing.

(29) "Imminent or actual health hazard" means:

(a) A breakdown or lack of equipment or power causing improper temperature control for potentially hazardous foods; and/or

(b) Lack of water preventing adequate handwashing or equipment cleaning and sanitizing; and/or

(c) Emergency situations including fire, flood, building collapse, or similar accident or natural disaster; and/or

(d) A sewage backup or sewage contamination within a food service establishment; and/or

(e) An occurrence of an outbreak of foodborne illness linked to the food service establishment.

(30) "Immediate service" means foods served to the public within thirty minutes of preparation.

(31) "Menu" means a written or graphic description of foods prepared and offered for sale or service by a food service establishment.

(32) "Mislabelled" means the presence of any false or misleading written, printed, or graphic material upon or accompanying food or food containers.

(33) "Mobile food unit" means a readily movable food service establishment.

(34) "Modified atmosphere packaging" means a process that completely encases food in an impermeable or partially permeable membrane, with either a partial or complete vacuum; or a gas or mixture of gases surrounding the food. Hermetically sealed containers are not considered to be modified atmosphere packaging.

(35) "Owner" means a person owning and/or responsible for the operation of a food service establishment.

(36) "Perishable food" means foods, other than potentially hazardous foods, where deterioration or spoilage due to loss of moisture or growth of molds and bacteria may occur.

(37) "Person" means any individual, partnership, corporation, association, or other legal entity or agency of state, county, or municipal government, or agency of the federal government which is subject to the jurisdiction of the state.

(38) "Person in charge" means the individual present in a food service establishment and designated supervisor of the food service establishment at the time of inspection or any food service worker present when a designated supervisor is absent.

(39) "pH" means a measure of the amount of acid in a food product.

(40) "Potentially hazardous food" means any natural or synthetic edible item, material, or ingredient in a form supporting rapid and progressive growth of infectious or toxigenic microorganisms or the slower growth of *Clostridium botulinum*. Potentially hazardous food:

(a) Includes any food of animal origin, raw, cooked, or processed;

(b) Includes certain cooked or prepared foods of plant origin, including but not limited to:

(i) Potato products;

(ii) Dry legumes;

(iii) Rice;

(iv) Sprouts; and

(v) Cut melons and cut cantaloupes.

(c) Excludes foods:

(i) With a water activity (*A_w*) value of 0.90 or less;

(ii) With a pH level of 4.6 or below;

(iii) Enclosed in unopened hermetically sealed containers commercially processed to achieve and maintain commercial sterility under nonrefrigerated storage and distribution conditions; and

(iv) Where laboratory evidence acceptable to the health officer indicates no likelihood of rapid or progressive growth of infectious or toxigenic microorganisms or the slower growth of *Clostridium botulinum*.

(41) "Restructured" means potentially hazardous foods processed and formed so surface contaminants may become incorporated inside the final product.

(42) "Sanitary design" means smooth, nonabsorbent, and easily cleanable.

(43) "Sanitized" means effective bactericidal treatment by a process providing enough accumulative heat or concentration of chemicals for enough time to reduce the bacterial count, including pathogens, to a safe level on food contact surfaces.

(44) "Sealed" means free of cracks or other openings permitting entry or passage of moisture or air.

(45) "Self-service" means any site within a food service establishment where customers dispense their own food or beverages.

(46) "Served" means offered to a person for consumption.

(47) "Single service articles" means utensils designed, fabricated, and intended by the manufacturer for one time use.

(48) "Sulfiting agents" means chemicals used to treat food to increase shelf life and enhance appearance including:

- (a) Sulfur dioxide;
- (b) Sodium sulfite;
- (c) Sodium bisulfite;
- (d) Potassium bisulfite;
- (e) Sodium metabisulfite; and
- (f) Potassium metabisulfite.

(49) "Temporary food service establishment" means a food service establishment operating at a fixed location for not more than twenty-one consecutive days in conjunction with a single event or celebration.

(50) "Time/temperature" means the relationship between the length of time and the specific temperatures to which potentially hazardous foods are subjected during storage, transportation, preparation, cooking, reheating, dispensing, service, or sale.

(51) "Unpasteurized juice" means fruit or vegetable juice that has not been specifically processed to prevent, reduce, or eliminate the presence of pathogens, either through heat pasteurization or in another manner allowed under 21 CFR 101.17 (g)(7). This includes any beverage containing juice where neither the juice ingredient nor the beverage has been processed in the above manner.

(52) "Utensil" means any food contact implement used in storing, preparing, transporting, dispensing, serving, or selling of food.

(53) "Water activity (Aw)" means a measure of the amount of moisture available for bacterial growth in a food.

(54) "Wholesome" means in sound condition, clean, free from adulteration, and otherwise suitable for use as human food.

[Statutory Authority: RCW 43.20.050, 00-02-014, § 246-215-010, filed 12/27/99, effective 1/27/00; 92-08-112 (Order 261B), § 246-215-010, filed 4/1/92, effective 5/2/92.]

WAC 246-215-020 Food supplies. Food service establishment owners shall:

(1) Use or sell food supplies which are:

- (a) From approved sources;
- (b) In compliance with applicable federal, state, and local laws, ordinances, and regulations;
- (c) Clean, wholesome, and free from spoilage and adulteration;
- (d) Protected from becoming adulterated;
- (e) Safe for human consumption; and
- (f) Hermetically sealed containers, processed in an approved commercial food processing establishment, when used.

(2) Use or sell commercially pasteurized fluid milk, fluid milk products, dry milk, and dry milk products which meet the Grade "A" quality standards contained in the most current version of the federal Pasteurized Milk Ordinance, except:

(a) Grade "A" raw milk as defined under RCW 15.36-140 may be sold in the original container for off-premises consumption in retail food stores only;

(b) Unripened raw milk cheese and similar raw milk cultured products may be sold in retail stores for off-premises consumption and may be used in food service establishments,

only if the foods are subsequently cooked to a minimum temperature of 165° F; and

(c) Properly fermented raw milk cheeses, produced using a flash heating process and meeting cheese composition requirements described under WAC 246-215-040 (6)(c), may be sold or used in food service establishments and are exempted from the cooking requirements of (b) of this subsection.

(3) Use or sell fresh and frozen shellfish (oysters, clams, mussels, and scallops):

(a) From sources approved by the department; or certified for interstate shipment in accordance with the National Shellfish Sanitation Program (NSSP); and

(b) Which are identified by one of the following methods:

(i) A tag or label containing name, address, state certification number, harvest date, and location attached to bags of unshucked shellfish;

(ii) A label containing name, address, and state certification number attached to containers of shucked shellfish; or

(iii) State certification numbers and harvest location provided on invoices accompanying shellfish.

(4) Use or sell eggs meeting WSDA or USDA standards. The use or sale of ungraded eggs, unpasteurized liquid eggs, except as specified in WAC 246-215-030 (1)(j), or cracked or checked eggs is prohibited.

(5) Use or sell only USDA inspected meat, meat products, poultry, and poultry products. Custom meat facilities defined in RCW 16.49.435 may process or handle uninspected meat for the household user. Custom meat facilities shall not use or sell uninspected meat to the public.

(6) Use or sell game meat:

(a) Processed in a state agriculture inspected processing plant;

(b) Processed in a processing plant with USDA voluntary inspection;

(c) Imported from outside the USA from a country having an approved program of inspection authorized by USDA or FDA; or

(d) Approved by the health officer for use in the following types of institutions:

(i) Jails and correction facilities; and

(ii) Distributing organizations limited to food banks and soup kitchens specified under RCW 69.80.020.

[Statutory Authority: RCW 43.20.050, 92-08-112 (Order 261B), § 246-215-020, filed 4/1/92, effective 5/2/92.]

WAC 246-215-030 Food protection. (1) Food service establishment owners shall protect food from potential or actual sources of contamination or adulteration during transporting, storing, preparing, cooking, displaying, and serving by the following methods:

(a) Covering food or food storage containers with tightly fitting covers manufactured from approved materials such as metal, plastic, plastic wrap, or aluminum foil, except:

(i) During necessary preparation or cooling periods;

(ii) When serving food to the customers;

(iii) When displaying or storing fresh, raw, unprocessed whole fruits and vegetables;

(iv) When displaying or storing raw, whole aquatic foods; and

(v) During storage, quarters or sides of meat, and primal cuts may be placed on clean sanitized hooks or racks.

(b) Prohibiting the storage of food under leaking refrigeration condensers, exposed or unprotected sewer lines, leaking water lines, or water lines with accumulations of condensed water;

(c) Storing foods above the floor level to prevent contamination and permit easy cleaning, except:

(i) Floor storage is permitted for foods stored in bulk if contained in impervious covered containers;

(ii) Storage on a floor surface is permitted when beverages are in pressurized beverage containers; or foods are protected by glass, durable plastic, cans, or other waterproof containers; and

(A) Floors beneath the foods are dry and easily cleanable; and

(B) Foods can be easily moved to allow cleaning of the floor.

(d) Prohibiting the storage of food, utensils, or single-service articles in toilet rooms, toilet room vestibules, or garbage rooms;

(e) Labeling foods removed from original containers, unless identity of the food is unmistakable;

(f) Providing protection from contamination through use of a sneeze guard, display case, packaging, or other effective measures;

(g) Minimizing hand contact with foods by:

(i) Using appropriate utensils, including single service food service gloves when practical; and

(ii) Providing tongs, bakery papers, scoops, spatulas, ladles, and similar utensils for handling foods during display or service.

(h) Prohibiting the storage of raw meats, poultry, and aquatic foods above foods requiring no additional cooking before service or in a manner increasing the probability of cross-contamination;

(i) Prohibiting the use of ice for human consumption following use for cold holding or after contamination; or

(j) Prohibiting use of pooled eggs prepared from raw eggs, except:

(i) If used for immediate service; or

(ii) If cooked to 140° F. or above within thirty minutes of breaking.

(k) Prohibiting egg breaking procedures where liquid eggs contact egg shells such as egg breaking machines;

(l) By any other methods approved by the health officer.

(2) In emergency situations when an imminent or actual health hazard exists, the owner or person in charge of a food service establishment shall take appropriate action to prevent adulteration of foods, including the following:

(a) Protecting foods from contamination;

(b) Ensuring proper temperature controls;

(c) Notifying the health officer; and

(d) Destroying contaminated, adulterated, or temperature abused foods after consultation with the health officer.

(3) Food service establishment owners shall:

(a) Prohibit application of sulfiting agents in the food service establishment;

(b) Prohibit the storage of sulfiting agents on the premises unless in packaged form, clearly labeled, and offered for retail sale; and

(c) Allow sulfiting agents only if contained within properly labeled commercially processed foods.

(4) When owners of food service establishments store or display mollusks in live holding systems, they shall protect the mollusks from contamination by:

(a) Requiring an approved source for seawater placed in the system; or

(b) Using a commercial mix for artificial seawater mixed with potable drinking water; and

(c) Completely separating mollusks from crustaceans or fish.

(5) Owners of food service establishments specified in WAC 246-215-020 (6)(d) shall establish control measures for the use of game meat. These control measures designed to prevent illness and approved by the health officer include:

(a) Requiring adequate facilities for butchering and processing;

(b) Designation of a person in charge who is responsible for:

(i) Record keeping of all game meat received and used;

(ii) Insuring separation of raw game meat from all other foods;

(iii) Adequate cooking of all game meat to 165° F. or above; and

(iv) Maintenance of temperature monitoring and control.

(c) Compliance with all other parts of this chapter, unless specified otherwise.

(6) Game meat, except sources specified in WAC 246-215-020 (6)(a), (b), and (c), may only be possessed, handled, and processed by retail food stores:

(a) When approved by the health officer;

(b) For hunters who bring their game meat to the retail store and receive the same game meat back after the completion of processing;

(c) So contamination is avoided by separating raw game meat from all other foods; and

(d) When all processing of game meat occurs at a separate time than processing of all other meat or meat products.

(7) Owners of food service establishments may sell or serve mold cultured cheeses. The sale or service of moldy cheese is prohibited unless the cheese is reconditioned by removing the mold in the following manner:

(a) If the cheese has been held under refrigeration, a one-half inch layer is removed and the moldy portions are discarded;

(b) If the cheese has been held at ambient temperatures, a one inch layer is removed and the moldy portions are discarded;

(c) The cutting is performed so that mold contamination of the new surfaces is minimized; and

(d) When cheese has high moisture content such as brie, camembert, cream cheese, or cottage cheese, or where mold filaments have deeply penetrated the surface, the entire cheese shall be discarded.

[Statutory Authority: RCW 43.20.050, 92-08-112 (Order 261B), § 246-215-030, filed 4/1/92, effective 5/2/92.]

WAC 246-215-040 Public health labeling. (1) Food service establishment owners shall label all food products offered for sale if enclosed in a package or container; except:

- (a) Food products produced on-site;
- (b) Nonpotentially hazardous bakery products from approved sources; or
- (c) Single service portions or other packaged foods which are shipped to the food service establishment enclosed within a properly labeled master carton.

(2) Food service establishment owners shall label modified atmosphere packaged foods in compliance with WAC 246-215-060.

(3) Food service establishment owners shall ensure labels include:

- (a) The common name of the food;
- (b) All ingredients, including food additives, in descending order of predominance;
- (c) The name, city, state, and zip code of the manufacturer; and
- (d) A packaging date code, when required by law or when the food is potentially hazardous.

(4) Food service establishment owners shall ensure information contained on labels is:

- (a) Accurate;
- (b) Easily readable; and
- (c) In the English language, except that duplicate labeling in foreign languages is allowed.

(5) When labels, menus, or other printed or graphic materials are inaccurate or misleading and a report of illness or injury is associated with the food product, the health officer may:

- (a) Stop sale of the product until correctly labeled;
- (b) Require relabeling of the product; and
- (c) Issue public health advisories.

(6) Whenever raw milk or raw milk cheese or similar raw milk products are offered for sale in a food service establishment, the health officer shall:

- (a) Require conspicuous labeling of raw milk or products containing raw milk as "raw milk" or "contains raw milk";
- (b) Require conspicuous posting of signs near the product that state: "Warning: Raw milk or foods prepared from raw milk, such as unripened or fresh cheese, may be contaminated with dangerous bacteria capable of causing severe intestinal illnesses. Contact your local health department for advice or to report a suspected illness";
- (c) Exempt properly fermented raw milk cheeses from the labeling requirements contained in this subsection, provided the cheeses are produced using a flash heating process and they meet the following cheese composition requirements:

- (i) Moisture content of 40% or less;
- (ii) Saline-in-moisture content of 3.75% or greater;
- (iii) Water activity (Aw) of 0.96 or less; and
- (iv) pH of 5.40 or less.

(7) Food service establishment owners shall label packaged or bulk foods containing sulfiting agents at detectable levels as follows:

- (a) Accept accurate labels placed on packaged foods by the manufacturer;

- (b) Place a label on prepackaged foods stating, "This food contains a sulfiting agent";

- (c) Place a sign or label on the bulk food container or in a conspicuous place nearby stating, "The following food or foods contain a sulfiting agent,";

- (d) Except these foods may be sold without labeling:

- (i) Wine by the glass;
- (ii) Salad bars; and
- (iii) Delicatessens and similar take-out food facilities when food is prepared on-site.

(8) Food service establishment owners shall provide prominent and conspicuous labels on bulk food display units with at least one of the following:

- (a) Manufacturer's or processor's container label plainly in view;
- (b) A card, sign, or other appropriate device stating the common name of the food; or
- (c) A list of ingredients and any food additives contained in the product.

(9) Food service establishment owners shall ensure accurate labels are present on bulk containers of chemicals and pet foods.

(10) When raw or undercooked meats, eggs, or aquatic foods, or unpasteurized fruit or vegetable juices, are offered for immediate service or for sale as ready-to-eat, the health officer shall require these foods to be identified, as such:

- (a) On the menu;
- (b) On the label; or
- (c) On a sign clearly visible to the patrons.

(11) The health officer may approve alternate wording on signs required in subsections (6) and (7) of this section.

[Statutory Authority: RCW 43.20.050. 00-02-014, § 246-215-040, filed 12/27/99, effective 1/27/00; 92-08-112 (Order 261B), § 246-215-040, filed 4/1/92, effective 5/2/92.]

WAC 246-215-050 Food preparation. (1) The health officer may require a food service establishment owner to limit or modify food preparation and may delete some menu items when the available equipment is inadequate to rapidly cool or reheat, properly cook, hot hold, cold hold, or process potentially hazardous foods.

(2) Food service establishment owners shall prepare, display, serve, and transport food:

- (a) Only with safe and necessary time-temperature steps;
- (b) With a minimum amount of hand contact;
- (c) With suitable utensils;
- (d) On clean, sanitized surfaces:
 - (i) Washed, rinsed, and sanitized as required under this chapter prior to use; and
 - (ii) Washed, rinsed, and sanitized to prevent cross-contamination.

(3) Food service establishment owners shall:

- (a) Maintain the internal temperature of potentially hazardous food at 45° F. or below, or 140° F. or above, at all times except as provided in these regulations;

- (b) Minimize the time potentially hazardous foods remain at room temperature during preparation to a total time of two hours;

- (c) Store in-use serving utensils:

- (i) In the food product, only if the handle remains out of the food item; except in ice machines;
- (ii) In a running water dipper well;
- (iii) In water above 140° F., or below 45° F.;
- (iv) For ice machines, either on a clean dry surface or in an approved utensil holder; or
- (v) By other approved methods;
- (vi) Except that in-use serving utensils for nonpotentially hazardous foods may be stored on a clean surface.

(d) Discard any leftover foods already served to a customer; except that packaged, nonpotentially hazardous foods which are still packaged in a sound and sanitary condition, may be re-served. Properly dispensed, nonpotentially hazardous foods such as those dispensed by using squeeze dispensers, covered containers with proper serving utensils, or shaker dispensers, may be re-served.

(e) Ensure all foods served raw are thoroughly washed with potable water before serving;

(f) Prepare potentially hazardous salads and sandwich spread using cold ingredients prechilled to 45° F. or below;

(g) Ensure potentially hazardous foods transported or stored in ice are prechilled to 45° F. or below.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-050, filed 4/1/92, effective 5/2/92.]

WAC 246-215-060 Modified atmosphere packaging.

(1) Modified atmosphere packaging of foods in food service establishments is permitted by the health officer for the following:

- (a) Nonpotentially hazardous foods;
- (b) Raw meat;
- (c) Natural hard or semi-soft cheeses containing live starter culture organisms; and
- (d) Foods which are rapidly frozen and are stored frozen until reheated or thawed for immediate service. Foods frozen under this subsection shall meet all of the following continuous cooling and freezing requirements:
 - (i) Cooling foods from 140° F. to 70° F. or below within two hours;
 - (ii) Cooling foods from 140° F. to 45° F. or below within four hours;
 - (iii) Cooling foods to below 38° F. within twelve hours; and
 - (iv) Freezing foods completely to below 10° F. within twenty-four hours.

(2) Food service establishment owners shall not perform modified atmosphere packaging on the premises for any foods unless allowed under subsection (1) of this section; except

(3) The health officer may allow additional foods to be modified atmosphere packaged only if an approved HACCP based procedure which controls the growth of bacterial pathogens is in place. Acceptable controls would be:

- (a) Maintaining water activity below 0.93;
- (b) Maintaining pH below 4.6;

(c) Using processed meats or meat products, poultry, or poultry products produced in a plant regulated by USDA and received in an intact package before modified atmosphere packaging;

(2003 Ed.)

(d) Properly curing the food on site using a standard recipe approved by the health officer with an initial sodium nitrite concentration of 120 ppm and 3.5% salt concentration; or

(e) Properly processing uncured meats or poultry on-site by monitoring critical control points established in the HACCP plan specified in subsection (4)(e) of this section.

(4) Whenever foods are modified atmosphere packaged under subsection (3) of this section, the health officer shall require all of the following:

- (a) Store the food at 38° F. or below;
- (b) Sell the food within fourteen days of packaging;
- (c) Prohibit exceeding the original processor's shelf life, if applicable;
- (d) Establish critical control points during processing, packaging, and storage;
- (e) Monitor critical control points established in (d) of this subsection by any or all of the following:
 - (i) Routine laboratory testing;
 - (ii) Measuring refrigerated storage temperatures;
 - (iii) Measuring temperatures during smoking or cooking processes;
- (iv) Providing other information requested by the health officer; and

(f) Maintain accurate records of critical control point monitoring specified in (e) of this subsection, for examination by the health officer;

(g) Attach the following labels:

- (i) "Keep refrigerated at 38° F. or below and use within seven days of purchase, unless frozen"; and
- (ii) "Sell by month/day/year" with the date established within fourteen days of packaging.

(5) Modified atmosphere packaging of aquatic foods, including fish, is prohibited by the health officer except under subsections (1)(d), (3)(a), (b), or (d) of this section.

(6) The food service establishment owner shall designate a person in charge of all modified atmosphere packaging operations to be responsible for control measures contained in subsections (4) and (9) of this section.

(7) Modified atmosphere packaged foods packaged in USDA or FDA regulated plants and maintained in intact packages are exempted by the health officer from meeting labeling requirements contained in subsection (4)(g) of this section.

(8) The food service establishment owner shall destroy modified atmosphere packaged foods which have exceeded the requirement for foods to be sold within fourteen days of packaging (contained in subsection (4)(b) of this section), except until that date modified atmosphere packaged foods may be:

- (a) Frozen; or
- (b) Removed from the packaging and used in the food service establishment.

(9) Modified atmosphere packaged foods which have exceeded the requirement for foods to be sold within fourteen days of packaging (contained in subsection (4)(b) of this section) are prohibited by the health officer from sale.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-060, filed 4/1/92, effective 5/2/92.]

WAC 246-215-070 Temperature control. (1) The food service establishment owner shall:

(a) Provide metal, stem-type, numerically scaled food thermometers accurate to within 2° F. in the appropriate range for the foods being tested;

(b) Ensure thermometers are checked for accuracy;

(c) Be allowed to use digital thermometers or thermocouples to measure temperatures as long as they are accurate to within 2° F. and are capable of measuring all food temperatures contained in (e) of this subsection;

(d) Equip each refrigeration unit with a numerically scaled thermometer accurate to within 3° F. located:

(i) To be easily readable; and

(ii) In the warmest part of the unit.

(e) Ensure food service workers use thermometers to measure food temperatures to attain and maintain safety for potentially hazardous foods during:

(i) Cooking;

(ii) Reheating;

(iii) Hot holding;

(iv) Cooling; and

(v) Cold holding.

(2) Food service workers shall safely thaw potentially hazardous foods:

(a) In refrigeration units at a temperature of 45° F. or less;

(b) Under potable running water of a temperature of 70° F. or less with sufficient water velocity to agitate and float loose food particles into the overflow; or

(c) In an approved cooking unit as part of a continuous cooking process, only when the food depths or thickness for solid foods is less than four inches.

(3) Food service workers shall safely cook all parts of potentially hazardous foods requiring cooking to the following minimum internal temperatures:

(a) 165° F. or above for:

(i) Poultry or any food containing poultry;

(ii) Stuffed meats or stuffing containing meats; and

(iii) Casseroles containing potentially hazardous foods.

(b) 155° F. or above for ground, fabricated, or restructured meats; except that ground beef may be cooked to lower temperatures if specifically ordered by the immediate consumer;

(c) 150° F. or above for pork or any food containing pork;

(d) 130° F. or above for:

(i) Rare roast beef; and

(ii) Rare beef steak, except that beef steak may be cooked to a lower temperature if specifically ordered by the immediate consumer.

(e) 140° F. or above for eggs and foods containing uncooked eggs, unless specifically ordered by the immediate consumer otherwise, except:

(i) Health care facilities such as nursing homes and hospitals shall only use pasteurized eggs or eggs cooked to 140° F. or above unless a physician's statement allows otherwise; and

(ii) Traditionally uncooked or undercooked eggs when used to prepare foods such as eggs benedict, caesar salad, meringue, or hollandaise sauce shall be:

(A) Prepared for immediate service to the customer;

(B) Rapidly cooled and held at 45° F. or less; or

(C) Held hot at 140° F. or above.

(f) 140° F. or above for all other potentially hazardous foods except as specified under (a) through (e) of this subsection;

(g) Except that potentially hazardous foods that have been partially cooked or blanched shall be cooled rapidly using procedures contained in subsection (6) of this section and reheated before service as described in subsection (8) of this section.

(4) Food service establishment owners are prohibited from overnight cooking without temperature monitoring.

(5) Food service workers shall ensure potentially hazardous foods, after initial cooking or reheating, are held hot at or above the following temperatures:

(a) 130° F. for unsliced rare roast beef; or

(b) 140° F. for all other potentially hazardous foods;

(c) Except that overnight hot holding without temperature monitoring is prohibited.

(6) When potentially hazardous foods require cooling or cold holding after preparation, rapid methods of cooling from 140° F. to 45° F. shall be used. Food service workers shall use methods including:

(a) Reducing very viscous foods such as refried beans, chowders, and gravies to a thickness of two inches or less and:

(i) Placing immediately in a refrigerator or in a freezer; and

(ii) Leaving uncovered until cooled to 45° F. or below, while protecting the food from cross-contamination.

(b) Reducing foods not listed in subsection (6)(a) of this section to a thickness of four inches or less and:

(i) Placing immediately in a refrigerator or freezer; and

(ii) Leaving uncovered until cooled to 45° F. or below, while protecting the food from cross-contamination.

(c) Placing liquid foods deeper than four inches into an ice and water bath provided:

(i) The container is immersed to the depth of the food;

(ii) Ice is replaced as it melts;

(iii) The food is frequently stirred;

(iv) A metal stem thermometer is used; and

(v) The food is refrigerated or frozen once cooled to 45° F.

(d) Using other methods for rapid cooling approved by the health officer, provided the food is cooled from 140° F. to 45° F. or below within four hours.

(7) Food service workers shall ensure potentially hazardous foods requiring cold holding are kept at 45° F. or below by:

(a) Using mechanical refrigeration;

(b) Storing in ice provided:

(i) The food is prechilled to 45° F. or below;

(ii) The container is placed in ice to the height of the food;

- (iii) Ice is replaced as it melts; and
- (iv) Melt water is frequently drained.

(c) Using refreezable ice or similar products with prior approval by the health officer;

(d) Except cold holding temperatures required for commercially prepared modified atmosphere processed aquatic foods are 38° F. or below.

(8) Food service workers shall ensure potentially hazardous foods previously cooked and cooled are rapidly reheated from 45° F.:

- (a) With no interruption in the reheating process;
- (b) In one hour or less;
- (c) To the following minimum temperatures:

(i) 165° F. for foods prepared in any food service establishment; or

(ii) 140° F. for foods prepared in any food processing establishment under jurisdiction of USDA or FDA only for initial reheating.

(d) In equipment designed to meet the performance standards provided in this subsection; and

(e) With frequent stirring for liquid or semi-solid potentially hazardous foods.

(9) Food service workers may reheat completely cooked potentially hazardous foods with no minimum reheating temperature only if they are:

- (a) Served either hot or cold; and
- (b) Reheated to order in individual portions when ordered by the consumer.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-070, filed 4/1/92, effective 5/2/92.]

WAC 246-215-080 Personal hygiene. (1) Food service workers shall wash their hands, including fingernails, in an approved handwashing facility by applying soap, using warm water, scrubbing thoroughly, rinsing, and then drying, using methods which prevent recontamination:

- (a) Before starting work; and
- (b) During work, as often as necessary to prevent contamination of foods:
 - (i) After using the toilet;
 - (ii) After handling raw meat, poultry, or aquatic foods;
 - (iii) After handling unclean items;
 - (iv) After eating or smoking; and
 - (v) Before preparing ready-to-eat foods.

(2) Food service workers shall:

- (a) Wear clean outer garments;
- (b) Maintain a high degree of personal cleanliness; and
- (c) Restrain hair as necessary.

(3) The food service establishment owner shall ensure bactericidal and viricidal hand rinses are used only in addition to approved handwashing methods.

(4) The food service establishment owner shall ensure eating or use of tobacco in any form by food service workers is permitted only in designated areas approved by the health officer.

(5) The food service establishment owner shall provide adequate facilities for the orderly storage of food service workers' clothing and personal belongings.

(6) The person in charge of the food service establishment shall ensure all food service workers:

(a) Comply with the provisions of chapter 69.06 RCW and chapter 246-217 WAC;

(b) Obtain valid food and beverage service worker permits within thirty days of employment; and

(c) Maintain current food and beverage service worker permits.

(7) The person in charge of the food service establishment must display or file the food and beverage service workers permits, or copies thereof, where they are available for inspection by the health officer upon request.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-080, filed 4/1/92, effective 5/2/92.]

WAC 246-215-090 Sanitary design, construction, and installation of equipment and utensils. (1) Food service establishment owners shall use equipment and utensils designed and of such materials and workmanship to be:

- (a) Smooth;
- (b) Easily cleanable;
- (c) Durable;
- (d) In good repair; and
- (e) In conformance with the current standards and listings of the National Sanitation Foundation or equivalent.

(2) Food service establishment owners shall ensure food contact surfaces of equipment and utensils are:

- (a) Made of food grade material;
- (b) Smooth;
- (c) Easily accessible for cleaning;
- (d) Nontoxic;
- (e) Corrosion resistant; and
- (f) Nonabsorbent.

(3) When single service articles are used, the food service establishment owner shall ensure they are:

- (a) Made from clean, sanitary, and safe materials; and
 - (b) Prohibited from reuse.
- (4) Food service establishment owners shall install and maintain equipment to:

- (a) Facilitate cleaning of equipment and adjacent areas; and
- (b) Avoid placement under:
 - (i) Exposed or unprotected sewer lines;
 - (ii) Open stairwells;
 - (iii) Unprotected insulation; and
 - (iv) Other sources of contamination.

(5) Owners shall ensure food service establishments using equipment or utensils requiring cleaning and sanitizing are equipped with either:

(a) Approved mechanical dishwashing facilities and a sink with a minimum of two compartments in the dishwashing area;

(b) A sink with a minimum of three compartments, a space for soiled utensils ahead of the first compartment, and a drainboard for clean utensils when no mechanical dishwasher is available, or when utensils cannot be cleaned and sanitized in the mechanical dishwasher due to size or configuration; or

(c) A sink with a minimum of two compartments, a space for soiled utensils ahead of the first compartment, and a drainboard for clean utensils when:

(i) Only single service articles are provided for use by the consumer, very minimal utensil washing is needed, and the health officer determines it is consistent with the intent of the regulations; and

(ii) Only single service articles are provided for use by the consumer, only nonpotentially hazardous foods and ingredients are used, and the health officer determines it is consistent with the intent of the regulations.

(6) Food service establishment owners shall provide sink compartments of sufficient size to accommodate the largest utensil.

(7) Food service establishment owners of bars and taverns shall provide a sink compartment for disposing of liquid waste in addition to sinks necessary for cleaning and sanitizing.

(8) Food service establishment owners shall provide sufficient food preparation sinks in which foods may be:

- (a) Washed, soaked, rinsed, or drained;
- (b) Cooled or thawed; or
- (c) Processed in a manner requiring placement in a sink.

(9) Food service establishment owners shall prohibit use of food preparation sinks for:

- (a) Handwashing;
- (b) Utensil washing; and
- (c) Other activities which may contaminate foods.

(10) Food service establishment owners shall provide a mop sink or equivalent fixture capable of supplying and disposing of water for cleaning floors, walls, and other nonfood contact surfaces.

(11) The health officer may exempt food service establishment owners from subsections (5)(a), (7), (8), and (10) of this section when:

- (a) A plan review was approved prior to the effective date of these regulations;
- (b) The food service establishment was constructed prior to the effective date of these regulations; or
- (c) The menu, method of food preparation, and volume of food preparation present no health hazard.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-090, filed 4/1/92, effective 5/2/92.]

WAC 246-215-100 Equipment and utensil cleaning and sanitizing. (1) The following articles shall be thoroughly washed, rinsed, and sanitized by a food service worker after each use:

- (a) Utensils; and
- (b) Food contact surfaces of equipment, except cooking surfaces.

(2) All utensils and food contact surfaces of equipment used in preparation, service, display, or storage of potentially hazardous food shall be sanitized by a food service worker:

(a) Following any interruption of operations during which contamination of the food contact surfaces may have occurred; and

(b) Whenever contamination has occurred.

(3) When equipment and utensils are used for the preparation of potentially hazardous foods on a continuous or pro-

duction line basis, the food service establishment owner shall ensure utensils and the food contact surfaces of equipment are washed, rinsed, and sanitized. The health officer, based on food temperatures, type of food, and amount of particle accumulation shall specify the minimum time interval between cleaning operations.

(4) The food service establishment owner shall ensure cleaning and sanitizing of food contact surfaces of equipment and utensils are accomplished by first prescraping or prerinsing and then by either of the following methods:

(a) Manual dishwashing in proper sequence:

(i) Washing in a clean, hot detergent solution;

(ii) Rinsing in clean, warm water;

(iii) Sanitizing by immersion for at least one minute in:

(A) A chemical sanitizing solution at proper concentration as described in C.F.R. 21.178; or

(B) A mechanically heated sink at a temperature of at least 170° F.; and

(iv) Air drying; or

(b) Mechanical dishwashing which washes and then sanitizes by:

(i) A high temperature final rinse with a minimum of 180° F. measured by the gauge;

(ii) A high temperature final rinse with a minimum of 160° F. measured at the surface of the utensil;

(iii) An approved concentration of chemical sanitizer as described in C.F.R. 21.178 which is automatically dispensed; or

(iv) A method approved by the health officer consistent with the intent of the regulations.

(5) The food service establishment owner shall ensure cleaned and sanitized equipment, utensils, and single service articles are stored to:

(a) Protect from all sources of contamination; and

(b) Minimize unnecessary handling.

(6) Food service workers shall ensure wiping cloths used for cleaning up food spills or wiping work surfaces, table surfaces, high chairs, equipment, utensils, or foodworkers' hands are:

(a) Kept in a clean, sanitary condition at all times;

(b) Moistened with an approved sanitizing solution at all times when in use; and

(c) Stored in a proper concentration of sanitizing solution between uses.

(7) Food service workers shall be responsible for monitoring sanitizing operations by:

(a) Checking temperature gauges;

(b) Measuring chemical concentrations with appropriate methods; or

(c) Using premeasured sanitizing packages or tablets, following label directions.

(8) The food service establishment owner shall ensure:

(a) Wiping cloths used for removing food spills from tableware such as plates or bowls, are clean, dry, and used for no other purposes;

(b) Cooking surfaces of equipment are cleaned at least once daily; and

(c) Nonfood contact surfaces of equipment are cleaned at such intervals to keep them clean and in a sanitary condition.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-100, filed 4/1/92, effective 5/2/92.]

WAC 246-215-110 Poisonous or toxic materials. (1)

Food service establishment owners shall allow poisonous or toxic materials on the premises only under the following conditions:

- (a) When necessary and intended for the operation and maintenance of the food service establishment;
- (b) When used to prevent or control pests;
- (c) When used to clean and sanitize equipment, utensils, and work surfaces; or
- (d) When offered for sale in a retail food store, grocery, or similar food service establishment, provided these materials are separated from food and single-service articles by:

- (i) Spacing;
- (ii) Partitioning;
- (iii) Dividers; or
- (iv) Storage below food or single-service articles.

(2) Food service establishment owners shall ensure commercially filled containers of poisonous or toxic materials are labeled in accordance with Environmental Protection Agency regulations. Small containers may be filled or taken from a properly labeled container only when identified with the common name of the material.

(3) Food service establishment owners shall ensure poisonous or toxic materials are stored and used:

- (a) In accordance with the manufacturer's label requirements;
- (b) In a manner preventing adulteration of food and contamination of food contact surfaces, utensils, and single-service articles; and
- (c) So food service workers and other persons are protected from potential health and safety hazards.

(4) Food service establishment owners shall ensure lubricants used on food contact surfaces of equipment are nontoxic.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-110, filed 4/1/92, effective 5/2/92.]

WAC 246-215-120 Sanitary facilities and controls.

(1) Food service establishment owners shall ensure:

- (a) Their water source is;
 - (i) Adequate in quantity and quality;
 - (ii) Supplied by a source approved under chapter 246-290 WAC (formerly chapter 248-54 WAC); and
 - (iii) Monitored according to standards established by the health officer.
- (b) Use of bottled water from an approved source; and
- (c) Ice used for any purpose is:
 - (i) Made from an approved water source; and
 - (ii) Manufactured, stored, transported, and handled in a sanitary manner.

(2) Food service establishment owners shall dispose of all liquid waste including gray water, mop water, and ice melt:

- (a) Into a public sewer system;
- (b) Into an approved on-site sewage disposal system; or
- (c) In another manner approved by the health officer.

(3) Food service establishment owners shall ensure plumbing is:

- (a) Sized, installed, and maintained in accordance with applicable state and local plumbing codes;
- (b) Free of cross connections between potable water supplies and:
 - (i) Nonpotable or questionable sources of water; or
 - (ii) Chemical feed lines or similar devices.
- (c) Indirectly drained from ice machines, food preparation sinks, beverage ice sinks, salad bars, dipper wells, and mechanical dishwashers, into:
 - (i) A floor sink;
 - (ii) Hub drain; or
 - (iii) A similar device.

(4) Food service establishment owners shall install a properly vented dual check valve device or an approved reduced pressure backflow assembly between copper pipe or tubing and carbonated beverage dispensing machines. Carbonated beverage dispensing machines installed before the effective date of these regulations are exempt from this requirement.

(5) Food service establishment owners shall ensure toilets for food workers are:

- (a) Provided within the food service establishment; or
- (b) Convenient to food workers and within two hundred feet of the food service establishment.

(6) Food service establishment owners shall ensure toilet facilities for patrons are provided within, or convenient to, the food service establishment when:

- (a) Customer seating for on-premises consumption of food or drink is provided; and
- (b) The food service establishment was constructed or extensively remodeled after the effective date of these regulations.

(7) Toilet facilities may be used jointly by patrons and food service workers, provided patrons accessing the facility are excluded from food preparation and storage areas.

(8) Food service establishment owners shall ensure all toilet facilities are:

- (a) Of sanitary design;
- (b) Kept clean;
- (c) In good repair;
- (d) Provided with toilet paper; and
- (e) Provided with easily cleanable waste storage receptacles.

(9) Food service establishment owners shall ensure hand sinks are:

- (a) Accessible to food workers at all times;
- (b) Located to permit convenient use by all food workers in food preparation, food service, and utensil washing areas and in, or immediately adjacent to, toilet facilities; and
- (c) Used exclusively for hand washing.

(10) Food service establishment owners shall be responsible for maintenance of hand sinks designated for use by food service workers and patrons and ensure each hand sink is:

- (a) Provided with hot, at a minimum temperature of 100° F., and cold running water provided through a mixing faucet;
- (b) Provided with hand soap;

- (c) Provided with single use towels or other hand drying devices approved by the health officer; and
- (d) Kept clean and in good repair.

(11) Food service establishment owners shall ensure hand operated automatic faucets have a minimum cycle of fifteen seconds.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-120, filed 4/1/92, effective 5/2/92.]

WAC 246-215-130 Garbage, rubbish, and litter. The food service establishment owner shall:

(1) Properly store and dispose of all garbage, rubbish, and litter in and around a food service establishment. Storage prior to disposal shall be in containers that are:

- (a) Durable;
- (b) Easily cleanable;
- (c) Insect and rodent proof;
- (d) Nonabsorbent;
- (e) In sound condition;
- (f) Watertight; and
- (g) Kept covered with tight fitting lids except when stored in a closed, pest-proof room or enclosure.

(2) Dispose of liquid wastes as waste water when collected from:

- (a) Leaking garbage containers;
 - (b) Garbage compacting operations; or
 - (c) Cleaning operations.
- (3) Store all other rubbish in containers or other areas in a manner approved by the health officer.
- (4) Use rooms, enclosures, areas, and containers adequate in size and number for garbage storage.
- (5) Prevent overflows and nuisances caused by garbage, rubbish, and litter by:
- (a) Ensuring frequent disposal;
 - (b) Providing adequate cleaning facilities; and
 - (c) Ensuring that containers, rooms, and areas are cleaned as needed.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-130, filed 4/1/92, effective 5/2/92.]

WAC 246-215-140 Pests and pest control. Food service establishment owners shall:

- (1) Take effective measures to minimize:
 - (a) Entry of pests such as rodents and insects; and
 - (b) Presence of pests.
- (2) Ensure the premises are kept in such condition to prevent:
 - (a) Harborage of pests; and
 - (b) Feeding of pests.
- (3) Ensure only pesticides labeled for use in food service areas are stored on the premises or used to eliminate or control pests.
 - (4) Ensure pesticides are stored:
 - (a) In cabinets;
 - (b) In a physically separate place used for no other purpose; and
 - (c) Below or separate from food, food equipment, utensils, or single service articles.
 - (5) Ensure that pesticides are applied:
 - (a) In accordance with label directions; and

[Title 246 WAC—p. 188]

(b) In compliance with Washington state department of agriculture rules located in chapter 16-228 WAC, pesticide regulations, to prevent adulteration of foods and contamination of food contact surfaces.

(6) Employ the services of a licensed pest control operator when the health officer determines:

(a) Measures taken by the owner of the food service establishment are ineffective; or

(b) Pest problems are severe and extend beyond the property boundaries controlled by the food service establishment owner.

(7) Ensure that automatic dispensing aerosol units, if used, are:

(a) Prohibited in all areas where food is prepared or served; and

(b) Installed and used only in areas outside the influence area of ventilation systems and at least twenty feet away from any:

- (i) Food storage area;
- (ii) Food preparation or service area;
- (iii) Unprotected food contact surfaces; and
- (iv) Utensil washing or storage area.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-140, filed 4/1/92, effective 5/2/92.]

WAC 246-215-150 Construction and maintenance of physical facilities. Food service establishment owners shall:

(1) Ensure floors and floor coverings in all areas are:

- (a) Constructed of easily cleanable materials;
- (b) Kept clean;
- (c) In good repair; and
- (d) Coved at the floor/wall junctures, except for carpeted areas.

(2) Provide proper construction of floors and floor coverings with the following characteristics:

- (a) Water impervious construction;
- (b) Grease resistance;
- (c) Durability; and
- (d) Drains provided when water or pressure spray methods of cleaning are used, in any of the following areas:
 - (i) Food preparation areas;
 - (ii) Food and utensil storage areas;
 - (iii) Utensil washing areas;
 - (iv) Walk-in refrigerators;
 - (v) Dressing rooms or locker rooms with shower facilities; and
 - (vi) Bathrooms where toilets or urinals are located.
- (3) Ensure walls, windows, doors, and ceilings in all areas are clean and in good repair.
- (4) Ensure that walls are constructed, in addition to requirements in subsection (3) of this section, with the following characteristics:
 - (a) Smooth finish;
 - (b) Nonabsorbent surfaces; and
 - (c) Construction with easily cleanable materials in the following areas:
 - (i) Walk-in refrigerators and freezers;
 - (ii) Food preparation areas;
 - (iii) Utensil washing areas;

(2003 Ed.)

- (iv) Dressing rooms or locker rooms with shower facilities; and
- (v) Bathrooms.
- (5) Provide:
 - (a) Lighting of at least thirty foot candles in the following:
 - (i) Areas where food is prepared or stored;
 - (ii) Areas where utensils are washed;
 - (iii) Areas where hands are washed;
 - (iv) In bathrooms; and
 - (v) When cleaning is occurring.
 - (b) Proper shields or guards for lights in the food preparation and storage areas.
- (6) Ensure design, installation, and maintenance of ventilation systems in accordance with applicable state and local mechanical and fire codes; and
 - (a) Provide ventilation systems, when necessary, to keep all areas free of excessive:
 - (i) Heat;
 - (ii) Steam;
 - (iii) Condensation;
 - (iv) Fumes and vapors;
 - (v) Obnoxious odors; and
 - (vi) Smoke.
 - (b) Design and maintain ventilation hoods and filters to:
 - (i) Prevent grease and condensate from dripping into food or onto food contact surfaces; and
 - (ii) Allow ready removal of filters for cleaning and replacement.
 - (7) Maintain the premises by:
 - (a) Allowing only articles necessary for operation and maintenance of the food service establishment to be stored there;
 - (b) Prohibiting use of any room in the food service establishment as living or sleeping quarters:
 - (i) Except when separated from all food service operations by complete partitions and solid doors; and
 - (ii) Except for bed and breakfasts.
 - (c) Allowing live animals only under the following conditions:
 - (i) Fish, crustacea, and shellfish for food purposes in aquariums;
 - (ii) Fish in aquariums for display or decor;
 - (iii) Patrol dogs accompanying security or police officers; or
 - (iv) Dog guides or service animals, as defined under chapter 70.84 RCW, are allowed to accompany a blind, visually handicapped, hearing impaired, or otherwise physically disabled person in all areas of a food service establishment except in food preparation areas.
 - (d) Allowing only food service workers or other persons authorized by the health officer in food preparation and storage areas.

[Statutory Authority: RCW 43.20.050 and chapter 70.84 RCW. 02-09-028, § 246-215-150, filed 4/9/02, effective 5/10/02. Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-150, filed 4/1/92, effective 5/2/92.]

(2003 Ed.)

WAC 246-215-160 Mobile food units. (1) The owner of a mobile food unit shall comply with the requirements of this chapter, except as allowed in this section.

(2) The health officer may impose additional requirements to protect against health hazards related to the operation of a mobile food unit and may:

- (a) Limit the food preparation steps;
- (b) Restrict the mode of operation when facilities or equipment are inadequate to protect public health; or
- (c) Prohibit some menu items; and
- (d) When no imminent health hazard will result, may waive or modify requirements of this chapter.

(3) The person in charge of the mobile food unit shall ensure:

- (a) All foods, including ice, are from an approved source or commissary; and
- (b) All prepackaged foods are properly labeled, except when prepared in and sold from the same mobile food unit.

(4) The person in charge of the mobile food unit shall ensure proper temperature control of potentially hazardous foods on the unit by:

(a) Prohibiting cooling of potentially hazardous foods or ingredients;

(b) Allowing only potentially hazardous foods that have been cooked and cooled in an approved commissary to be reheated in individual portions for immediate service;

(c) Allowing only foods processed in commercial food processing plants to be reheated from 45° F. to 140° F. or above within one hour when reheated at the commissary or when reheated on the mobile unit after leaving the commissary.

(d) Prohibiting cooking of raw meats greater than one inch in thickness;

(e) Preheating hot holding equipment and prechilling cold holding equipment before loading potentially hazardous food onto the mobile unit; and

(f) Monitoring temperatures of potentially hazardous foods with a thermometer.

(5) The person in charge of the mobile food unit shall ensure:

(a) Preparation steps for potentially hazardous foods are minimized to decrease risk of foodborne illness;

(b) Facilities are adequate for all food preparation steps on the mobile unit; and

(c) Daily preparation of potentially hazardous foods prepared on the mobile unit.

(6) The owner of a mobile food unit shall:

(a) Allow only food service workers and persons authorized by the health officer to be present in the mobile food unit; and

(b) Ensure that all food service workers in the mobile food unit have current food and beverage service workers permits, unless all foods are prepackaged and nonpotentially hazardous.

(7) The owner of a mobile food unit shall ensure cold holding of potentially hazardous foods is accomplished by use of:

(a) Mechanical refrigeration; or

(b) Ice, when all food is prechilled and packaged in sealed containers.

(8) The owner of a mobile food unit shall only provide single service articles for use by the consumer.

(9) When a mobile food unit has a water supply:

(a) The source and system design shall be approved by the health officer;

(b) The capacity of the system shall be sufficient to furnish enough hot and cold water for each of the following procedures if they occur on the mobile food unit:

- (i) Food preparation;
- (ii) Utensil cleaning;
- (iii) Sanitizing;
- (iv) Handwashing; and
- (v) Facility cleaning.

(10) The owner of a mobile food unit with a water system shall ensure:

(a) All liquid waste is stored in a wastewater retention tank with at least fifteen percent more capacity than the water tank; and

(b) Wastewater is retained on the mobile food unit until disposed of by a method approved by the health officer.

(11) The owner of a mobile food unit shall provide:

(a) A three-compartment sink with hot and cold running water to wash, rinse, and sanitize utensils when equipment or utensils are reused on the mobile food unit; except

(b) This requirement may be waived or modified by the health officer when:

- (i) Limited food preparation occurs; or
- (ii) Additional clean utensils are available and utensil washing can take place at an approved base of operation.

(12) The person in charge of the mobile food unit shall provide a separate handwashing facility for food workers consisting of:

- (a) A sink with potable, warm, running water;
- (b) Soap; and
- (c) Paper towels.

(13) Food workers may use a three-compartment utensil washing sink for handwashing if:

(a) The mobile food unit owner locates it in the food preparation area; and

(b) The health officer determines that periodic handwashing will not interfere with washing of utensils.

(14) When only prepackaged food items are served, the health officer may waive or modify requirements for handwashing.

(15) The person in charge of the mobile food unit shall ensure toilet facilities for food workers are available and readily accessible within two hundred feet of the unit during operation.

(16) The owner of a mobile food unit or permit applicant shall submit properly prepared plans and specifications of the mobile food unit, base of operation, and/or commissary to the health officer for approval before:

- (a) Construction or remodeling begins;
- (b) The menu of the mobile food unit is changed; or
- (c) The method of food preparation is changed.

(17) The owner or permit applicant shall include in the plan:

- (a) Menu and food preparation steps;
- (b) Floor plan;
- (c) Equipment specifications and location;

(d) Finish schedule;

(e) Proposed itinerary or sites to be served;

(f) Source of water and specifications of the on-board plumbing;

(g) Site used for sewage disposal;

(h) Availability of restrooms for food service workers; and

(i) Base of operation or commissary.

(18) The permit applicant shall obtain approval from the department of labor and industries, if necessary.

[Statutory Authority: RCW 43.20.050, 92-08-112 (Order 261B), § 246-215-160, filed 4/1/92, effective 5/2/92.]

WAC 246-215-170 Customer self-service of food and bulk food dispensing. (1) Food service establishment owners shall protect foods from adulteration and contamination during customer self-service by:

(a) Designating a person to be responsible for the customer self-service area. This person shall:

(i) Monitor the customer self-service and bulk food areas to prevent tampering and contamination of foods;

(ii) Ensure adequate temperature control of potentially hazardous foods by:

(A) Cooking, reheating, or prechilling foods before offering for sale;

(B) Monitoring food temperatures with a metal stem thermometer; and

(C) Correcting improper storage practices.

(iii) Clean up any spills that occur and rotate stock;

(iv) Clean and sanitize storage containers and utensils used for food storage or handling of foods; and

(v) Dispose of any bulk foods returned to the food service establishment or contaminated by customers.

(b) Separating all bulk food display units from any containers of chemicals which might contaminate bulk foods and from pet foods by approved methods including one of the following:

(i) Horizontal separation, different aisles, or partitions between bulk foods and chemicals or pet foods; or

(ii) Vertical separation with chemicals or pet foods stored below bulk foods.

(c) Storing and dispensing all foods on display for customer self-service or bulk foods by one of the following:

(i) Gravity dispensing units;

(ii) Display units or storage containers with covers or lids; or

(iii) Foods on display while being held hot or cold shall be protected with a properly designed sneeze guard, display case, or easily movable cover.

(2) Food service workers shall utilize:

(a) Proper utensils when required in this section using the following:

(i) Properly designed and cleaned scoops, spatulas, tongs, and similar dispensing utensils present in or on each display unit;

(ii) In-use serving utensils stored in the food with the handles extending out of the food; or

(iii) Dispensing utensils stored clean and dry between uses in a protective enclosure or utensil holder.

(b) Containers for display of ready-to-eat foods with the lowest access point at least thirty inches above floor level, except for:

- (i) Raw fruits and vegetables;
- (ii) Honey;
- (iii) Oil; or
- (iv) Similar liquids as approved by the health officer.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-170, filed 4/1/92, effective 5/2/92.]

WAC 246-215-180 Bed and breakfast food service operations. (1) Owners of bed and breakfast homes and inns shall comply with all food supply, food handling, personal hygiene, food protection, food service establishment maintenance, permitting, and enforcement requirements under WAC 246-215-020, 246-215-030, 246-215-050, 246-215-060, 246-215-070, 246-215-080, 246-215-090, 246-215-100, 246-215-110, 246-215-120, 246-215-130, 246-215-140, 246-215-200, 246-215-210, 246-215-220, 246-215-230, 246-215-240, 246-215-260 and 246-215-300, except as otherwise provided in this section.

(2) The health officer may impose additional requirements to protect against health hazards related to the food service portion of a bed and breakfast operation and when no health hazard will result, may waive or modify requirements of these regulations.

(3) Owners of bed and breakfast homes and inns may prepare foods in their residential kitchen when:

- (a) All food service is limited to overnight guests;
- (b) Potentially hazardous foods items are prepared for immediate service;
- (c) Cooling and/or reheating of potentially hazardous foods prepared on-site is prohibited;
- (d) A minimum of a three-compartment sink or a sink together with a homestyle dishwasher with 155° F. water provided by a booster or a sanitizing cycle is available and used;
- (e) Food supplies for domestic use are separated from food supplies intended for customer use; and
- (f) Children under age ten and pets are kept out of the kitchen during preparation of foods for bed and breakfast guests.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-180, filed 4/1/92, effective 5/2/92.]

WAC 246-215-190 Temporary food service establishments. (1) The owner of a temporary food service establishment shall comply with the requirements of this chapter, except as allowed in this section.

(2) The health officer may impose additional requirements to protect against health hazards related to the operation of the temporary food service establishment and may:

- (a) Limit the preparation steps; or
- (b) Prohibit some menu items; and
- (c) When no health hazard will result, waive or modify requirements of this chapter.

(3) The owner of a temporary food service establishment shall ensure proper time/temperature control by:

(a) Prohibiting cooling of potentially hazardous foods at temporary food service establishments, except potentially hazardous foods may be cooled before an event if:

- (i) The food product that was cooled will be served cold; or
- (ii) Individual portions of the food are reheated for immediate service;
- (iii) The food was cooled in an approved facility with adequate cooling capacity and cold holding facilities; and
- (iv) Cooling procedures meet requirements contained in WAC 246-215-070(6).

(b) Ensuring rapid reheating of all potentially hazardous foods from 45° F. to a minimum temperature of 165° F. within thirty minutes, except when individual portions are reheated for immediate service.

(4) The owner of a temporary food service establishment shall safely prepare foods by:

- (a) Providing adequate facilities at the temporary food service establishment for all proposed food preparation steps; and
- (b) Ensuring all off-site preparation is done in an approved facility.

(5) The owner of a temporary food service establishment shall:

- (a) Apply for a permit to operate a temporary food service establishment, as far in advance as possible, to allow adequate time for review by the health officer;
- (b) Require the person in charge of the temporary food service establishment to obtain a valid food and beverage service worker permit before beginning work;
- (c) Allow only food service workers and other persons authorized by the health officer to be present in a temporary food service establishment;
- (d) Require the use of only single service articles for use by consumers;
- (e) Separate grills and barbecues from public access by using ropes or other approved methods; and
- (f) Construct booths to minimize:
 - (i) Public access;
 - (ii) Dust;
 - (iii) Mud; and
 - (iv) Overhead contamination.

(6) The owner of a temporary food service establishment shall provide:

(a) Approved hand washing facilities for food workers at the temporary food service establishment with:

- (i) Clean, warm, running water;
- (ii) Soap; and
- (iii) Paper towels.

(b) Readily accessible and available toilet facilities within two hundred feet of the temporary food service establishment; and

(c) Access within two hundred feet to a three compartment sink with running water to wash, rinse, and sanitize utensils when:

- (i) Equipment or utensils are reused on-site; or
- (ii) The temporary food service establishment operates for two or more consecutive days;

(iii) Except the health officer may approve an alternative utensil cleaning method when three compartment sinks are not available and no health hazard will exist.

(7) The health officer may allow handwashing in a three compartment utensil washing sink only if:

(a) The sink is located in the food preparation area; and

(b) Periodic handwashing will not interfere with washing of utensils.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-190, filed 4/1/92, effective 5/2/92.]

WAC 246-215-200 Permits required, suspension, revocation, enforcement. (1) Any person desiring to operate a food service establishment shall:

(a) Comply with the provisions of these regulations; and

(b) Make written application for a permit on forms provided by the health officer.

(2) Food service establishment owners operating a food service establishment:

(a) Shall possess a valid permit issued to him/her by the health officer;

(b) Shall post the permit conspicuously in the food service establishment;

(c) May be guilty of a misdemeanor pursuant to RCW 70.05.120 and/or local regulations if operating without a valid permit issued by the health officer; and

(d) May be exempt from the permit requirements for the sale of certain foods with prior authorization of the health officer and concurrence of the department.

(3) The health officer may suspend any permit to operate a food service establishment if:

(a) Continued operation of the food service establishment constitutes an imminent or actual health hazard;

(b) Operations, facilities, or equipment in the food service establishment fail to comply with these regulations;

(c) The holder of the permit does not comply with these regulations; or

(d) Interference with the health officer in the performance of his/her duties has occurred.

(4) When the health officer has suspended a food service establishment permit, the person in charge:

(a) Shall immediately cease all food service operations;

(b) Shall be notified in writing by the health officer that the food service establishment permit is immediately suspended upon service of the notice and the suspension shall remain in effect until a hearing with the health officer occurs. If the health officer finds the operation to be in compliance with the requirements of these regulations the suspension will be lifted;

(c) May request a hearing by filing a written request for a hearing with the health officer within ten days of receipt of the notice of suspension; and

(d) Shall be notified, if a written request for a hearing is not filed within ten days, that the suspension is sustained.

(5) Any food service establishment owner whose food service permit has been suspended may at any time make written application for a reinspection for the purpose of reinstatement of the permit. The application shall include a statement, signed by the owner, that in the owners's opinion, the

conditions causing the suspension of the permit have been corrected.

(6) Within two working days following receipt of a written request for a reinspection, the health officer shall make a reinspection, and reinstate the permit if the owner of the food service establishment is in compliance with these regulations.

(7) The health officer may use a permit suspension process different from those specified under subsections (3), (4), (5), or (6) of this section, if adopted by the local board of health.

(8) The health officer may revoke a food service permit after providing the owner of the food service establishment an opportunity for a hearing if:

(a) Serious and repeated violation(s) of any requirements of these regulations have occurred; or

(b) Repeated interference with, or assault upon, the health officer in the performance of his/her duty has occurred.

(9) Before revocation, the health officer shall notify, in writing, the owner of the food service establishment or the person in charge of the specific reason(s) why the permit is to be revoked. The notice shall state:

(a) That the permit will be revoked at the end of the ten days following such notice unless a written request for a hearing is filed with the health officer by the owner of the food service establishment within such ten-day period; and

(b) If a request for a hearing is not filed by the owner of the food service establishment within the ten-day period, the revocation of the permit becomes final.

(10) Any owner of a food service establishment whose permit has been revoked by the health officer, after a period of six months may:

(a) Make written application for a new permit; and

(b) Request a hearing with the health officer to determine whether a new permit will be issued.

(11) The health officer may use a permit revocation process different from those specified under subsections (8), (9), and (10) of this section if adopted by the local board of health.

(12) The health officer may initiate any one, or a combination of, compliance methods which include, but are not limited to:

(a) Holding an administration conference with the food service establishment owner or person in charge;

(b) Placing the owner of the food service establishment on probation;

(c) Setting conditions for continued operation of the food service establishment, by the owner, during the probation period;

(d) Requiring additional education and/or training of employees, management, and owners of the food service establishment; and

(e) Completing a hazard analysis critical control point (HACCP) evaluation and requiring monitoring procedures be implemented for critical control points identified.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-200, filed 4/1/92, effective 5/2/92.]

WAC 246-215-210 Service of notices. (1) A notice provided for in these regulations is properly served when it is:

- (a) Delivered to the holder of the permit;
- (b) Delivered to the person in charge of the food service establishment; or
- (c) Sent by registered or certified mail, return receipt requested, to the last known address of the holder of the permit.

(2) A copy of the notice shall be filed in the records of the health officer.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-210, filed 4/1/92, effective 5/2/92.]

WAC 246-215-220 Hearings. (1) The hearings provided for in these regulations shall be:

(a) Conducted by the health officer or his/her designee; and

(b) Conducted at a time and place designated by the health officer.

(2) The health officer or designee shall:

(a) Make a final finding based upon the complete hearing record;

(b) Sustain, modify, or rescind any notice or order considered in the hearing; and

(c) Furnish a written report of the hearing decision to the holder of the permit.

(3) An alternate hearing process, if adopted by a local board of health, may be used.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-220, filed 4/1/92, effective 5/2/92.]

WAC 246-215-230 Inspections and investigations. (1) Inspections or investigations of a food service establishment:

(a) Shall be performed by the health officer as often as necessary for the enforcement of these regulations;

(b) Shall be required by the health officer:

(i) Before issuing a new permit to a new food service establishment; and

(ii) Following extensive remodeling of a food service establishment.

(c) May be required by the health officer:

(i) For renewal of a permit;

(ii) Before issuing a new permit to an existing food service establishment; and

(iii) For an existing food service establishment when the on-site management has changed.

(2) The person in charge of any food service establishment shall permit the health officer, after proper identification, to enter at any time, for the purpose of making inspections or investigations to determine compliance with these regulations.

(3) The person in charge of the food service establishment shall permit the health officer to examine the records of the establishment to obtain information pertaining to:

(a) Food and supplies purchased, received, or used; and

(b) Any person employed which is pertinent to an illness investigation; or

(c) Other matters which may affect health or the enforcement of these regulations.

(4) The health officer may conduct a HACCP in lieu of, or in addition to, routine inspections. The health officer may investigate to ensure monitoring of critical control points.

(2003 Ed.)

(5) Whenever an inspection of a food service establishment is made:

(a) The health officer shall record the findings on an inspection report form approved by the department;

(b) The health officer shall state on the completed inspection report specific violations found, and establish a specific and reasonable period of time for correction; and

(c) The health officer shall furnish a copy of the completed inspection report to the person in charge of the food service establishment at the conclusion of the inspection.

(6) The health officer shall inspect all food service establishments at least once a year.

(7) The health officer shall conduct additional inspections of food service establishments based upon the risk of foodborne illness transmission as determined by:

(a) Types of foods served;

(b) Methods of food preparation and service;

(c) Number of meals served; and

(d) Past history of compliance.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-230, filed 4/1/92, effective 5/2/92.]

WAC 246-215-240 Examination, hold orders, condemnation, and destruction of food. (1) The person in charge of a food service establishment in which food has been improperly handled, stored, or prepared shall:

(a) Voluntarily destroy the questionable food; or

(b) Contact the health officer to determine if the food is safe for human consumption.

(2) The person in charge of a food service establishment shall denature or destroy any food if the health officer determines the food presents an imminent or actual health hazard.

(3) The health officer may examine or collect samples of food as often as necessary for enforcement of these regulations.

(4) The health officer may, after notice to the person in charge, place a written hold order on any suspect food until a determination on its safety can be made and shall:

(a) Tag;

(b) Label; or

(c) Otherwise identify any food subject to the hold order and complete a department-approved form for all suspect food.

(5) The hold order issued by the health officer shall include:

(a) Instructions for filing a written request for a hearing with the health officer within ten calendar days; and

(b) Notification that if a hearing is not requested in accordance with the instructions provided in the hold order, and the health officer does not vacate the hold order, the food shall be destroyed under the supervision of the health officer.

(6) When foods are subject to a hold order by the health officer the food service establishment owner is prohibited from:

(a) Using;

(b) Serving; or

(c) Moving them from the food service establishment.

(7) The health officer shall permit storage of food under conditions specified in the hold order, unless storage is not possible without risk to the public health, in which case,

[Title 246 WAC—p. 193]

immediate destruction shall be ordered and accomplished by the owner of the food service establishment.

(8) Based upon evidence provided at the hearing, the health officer shall either:

(a) Vacate the hold order; or

(b) Direct the owner of the food service establishment by written order to:

(i) Denature or destroy such food; or

(ii) Bring the food into compliance with the provisions of these regulations.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-240, filed 4/1/92, effective 5/2/92.]

WAC 246-215-250 Review of plans and menu. (1)

The food service establishment owner shall submit properly prepared plans and specifications to the health officer for approval whenever:

(a) A food service establishment is constructed;

(b) An existing structure is converted for use as a food service establishment;

(c) Significant changes to the methods of food preparation or style of service occurs; or

(d) An existing food service establishment undergoes an extensive remodel, provided that the health officer may waive a complete plan review if:

(i) The remodel does not substantially affect the requirements of these regulations; or

(ii) The health officer requires minor modifications of the existing food service establishment to improve compliance with these regulations.

(2) The health officer shall base plan approval on:

(a) Information on proposed type of menu and style of service, including:

(i) Type of food to be served;

(ii) Method of food preparation and type of cooking;

(iii) Seating capacity and anticipated maximum meals per day;

(iv) Designation of smoking and nonsmoking sections as applicable;

(v) Methods of customer service;

(vi) Type of customer utensils; and

(vii) Number of employees per shift.

(b) Information on proposed site, including:

(i) Site plan;

(ii) Availability of approved public water supply;

(iii) Availability of approved sewage disposal; and

(iv) Accessibility for delivery traffic, garbage storage, garbage pickup frequency, and other auxiliary needs.

(c) Information on proposed facilities, including:

(i) Floor plan;

(ii) Finishes used on floors, walls, and ceilings;

(iii) Number, types, and locations of sinks and drain

boards;

(iv) Plumbing specifications, such as types and locations of fixtures, drains, and grease traps;

(v) Restroom design and number of fixtures;

(vi) Types and locations of lighting; and

(vii) Types and locations of ventilation, including exhaust hoods, screened windows, or doors.

(d) Information on proposed equipment, including:

(i) Material and design of food contact surfaces;

(ii) Refrigeration and shelving design for rapid cooling, prechilling, thawing, and separation of raw meats from other foods;

(iii) Ice-making equipment for supplying ice bath cooling, salad bar, or buffet service;

(iv) Cooking, reheating, and hot holding equipment;

(v) Shelving for dry food storage;

(vi) Mechanical dishwashing machine and associated equipment; and

(vii) Design and installation of equipment, including self-service and display equipment.

(3) The procedure for plan approval is as follows:

(a) The food service establishment owner shall submit plans as described in this chapter;

(b) The health officer shall grant approval if the health officer determines the plans are satisfactory;

(c) The food service establishment owner shall submit a food service permit application and request a preoperational inspection; and

(d) Prior to operation of the food service establishment, the health officer shall provide a preoperational inspection to determine conformance with approved plans and compliance with these regulations.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-250, filed 4/1/92, effective 5/2/92.]

WAC 246-215-260 Procedure when disease transmission is suspected. (1) When a possible foodborne illness incident is reported to any food service employee, the person in charge of the food service establishment shall:

(a) Immediately report the incident to the local health officer; and

(b) Remove from sale and refrigerate any suspect foods until released by the health officer.

(2) When the health officer suspects that a food service establishment, or its employees, may be a source of a foodborne illness, the health officer shall take appropriate action to control the transmission of disease. Such actions shall include any or all of the following:

(a) Secure records that may enable identification of persons potentially exposed to the disease, and/or require additional assistance in locating such persons;

(b) Secure the illness history of each suspected employee;

(c) Exclude any suspected employee(s) from working in food service establishments until, in the opinion of the health officer, there is no further risk of disease transmission;

(d) Suspend the permit of the food service establishment until, in the opinion of the health officer, there is no further risk of disease transmission;

(e) Restrict the work activities of any suspected employee;

(f) Require medical and laboratory examinations of any food service employee and of his/her body discharges;

(g) Obtain any suspect food for laboratory examination; and

(h) Require the destruction of suspect food or prevent it from being served.

(3) The health officer shall prohibit food handlers with a communicable illness in a disease or carrier state from handling food if the infectious agent can be transmitted through food.

(4) The provisions of chapter 246-100 WAC, Communicable and certain other diseases shall apply.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-260, filed 4/1/92, effective 5/2/92.]

WAC 246-215-270 Variance clause. The health officer, upon written petition of the owner of the food service establishment, may grant a variance to any section of these regulations covering physical facilities, equipment standards, and food source requirements when:

(1) No health hazard would exist as a result of this action; and

(2) The variance is consistent with the intent of these regulations.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-270, filed 4/1/92, effective 5/2/92.]

WAC 246-215-280 Interpretation. (1) These regulations shall be enforced by the health officer in accordance with the interpretations contained in the 1976 edition of the United States Public Health Service, "Food Service Sanitation Manual," where applicable.

(2) When a section of these regulations conflicts with the "Food Service Sanitation Manual," these regulations shall apply.

(3) A local board of health may adopt more stringent regulations than those contained in these regulations.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-280, filed 4/1/92, effective 5/2/92.]

WAC 246-215-290 Separability clause. Should any section, paragraph, clause, or phrase of these rules and regulations be declared unconstitutional or invalid for any reason, the remaining rules and regulations shall not be affected.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-290, filed 4/1/92, effective 5/2/92.]

WAC 246-215-300 Penalty clause. Any person violating, refusing, or neglecting to comply with these regulations shall:

(1) Upon conviction be guilty of a misdemeanor under RCW 70.05.120; or

(2) May be subject to a civil penalty under local health department/district rules and regulations.

[Statutory Authority: RCW 43.20.050. 92-08-112 (Order 261B), § 246-215-300, filed 4/1/92, effective 5/2/92.]

**Chapter 246-217 WAC
FOOD WORKER CARDS**

WAC

246-217-005	Purpose and authority.
246-217-010	Definitions.
246-217-015	Applicability.
246-217-025	Issuance of food worker cards—Fees.
246-217-035	Validity and form of food worker cards.
246-217-045	Limited duty food worker cards.

(2003 Ed.)

246-217-060	Revocation of food worker card.
246-217-070	Right of appeal.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

246-217-001	Objective. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-001, filed 12/27/90, effective 1/31/91; Regulation.87.001, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.
246-217-002	Legal authority of the state board of health. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-002, filed 12/27/90, effective 1/31/91; Regulation.86.999, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.
246-217-011	Definitions. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-011, filed 12/27/90, effective 1/31/91; Regulation.86.001, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.
246-217-020	Communicable disease. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-020, filed 12/27/90, effective 1/31/91; Regulation.87.020, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.
246-217-030	Form of permits—Fees. [Statutory Authority: RCW 43.20.050 and chapter 69.03 RCW. 92-14-093 (Order 286B), § 246-217-030, filed 6/30/92, effective 7/31/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 69.06 RCW. 87-19-069 (Order 346), § 248-86-010, filed 9/16/87; Regulation.86.010, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.
246-217-040	Requirements for permits. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-040, filed 12/27/90, effective 1/31/91; Regulation.86.020, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.
246-217-050	Examination may be required. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-217-050, filed 12/27/90, effective 1/31/91; Regulation.86.040, effective 3/11/60.] Repealed by 99-13-019, filed 6/7/99, effective 7/8/99. Statutory Authority: RCW 43.20.050.

WAC 246-217-005 Purpose and authority. The purpose of chapter 246-217 WAC is to establish state board of health standards for the issuance of food worker cards (food worker permits) under chapter 69.06 RCW and RCW 43.20.050. To promote and protect the health, safety and well-being of the public and prevent the spread of disease by food, all food service workers in the state shall demonstrate through the process of examination that they possess an adequate knowledge of the principles and practices involved in the safe preparation, storage, and service of foods.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-005, filed 6/7/99, effective 7/8/99.]

WAC 246-217-010 Definitions. As used in this chapter of the rules and regulations, the following definitions apply:

(1) "Additional food safety training" means completion of a comprehensive training program on food safety of at least four hours in length. Training may include topics such as: Proper cooking, hot-holding, cold-holding and cooling of potentially hazardous foods; cross-contamination prevention; HACCP and/or proper hand washing techniques. Approval of training programs shall be obtained from jurisdictional health departments or the department by the training pro-

vider. Approval of training programs must be obtained in advance.

(2) "Applicant" means an individual applying to obtain an initial or renewal food worker card.

(3) "Department" means the Washington state department of health.

(4) "Food service establishment" means:

(a) A place, location, operation, site, or facility where food is manufactured, prepared, processed, packaged, dispensed, distributed, sold, served, or offered to the consumer regardless of whether or not compensation for food occurs, including but not limited to:

(i) Restaurants, snack bars, cafeterias, taverns, bars;

(ii) Retail food stores, supermarkets, retail meat markets, retail fish markets, retail bakeries, delicatessens;

(iii) Institutional operations licensed by the department, the state department of social and health services or local health officer, such as schools, hospitals, jails, prisons, nursing homes, boarding homes, adult family homes and child care facilities;

(iv) Central preparation sites, including caterers;

(v) Satellite servicing locations;

(vi) Temporary food service establishments or mobile food units;

(vii) Bed and breakfast operations;

(viii) Remote feeding sites; and

(ix) Vending machines dispensing potentially hazardous foods.

(b) This term does not include:

(i) Private homes where food is prepared or served for consumption by household members and/or their guests;

(ii) Establishments offering only commercially prepackaged nonpotentially hazardous foods;

(iii) Commercial food processing establishments, licensed and regulated by the USDA, FDA, or WSDA; and

(iv) Farmers exempt from licensure under RCW 36.71-090.

(5) "Food service worker" means an individual who works (or intends to work) with or without pay in a food service establishment and handles unwrapped or unpackaged food or who may contribute to the transmission of infectious diseases through the nature of his/her contact with food products and/or equipment and facilities. This does not include persons who simply assist residents or patients in institutional facilities with meals, or students in K-12 schools who periodically assist with school meal service.

(6) "Food worker card" means a food and beverage service workers' permit as required under chapter 69.06 RCW.

(7) "Health officer" means the county, city-county, or district health officer of a jurisdictional health department, or his/her authorized representative, or the representative of the department.

(8) "Jurisdictional health department" refers to one of the following:

(a) Local health district as defined in chapter 70.46 RCW.

(b) City-county health department as defined in chapter 70.08 RCW.

(c) County health department as defined in chapter 70.05 RCW.

(9) "Person" means any individual, partnership, corporation, association, or other legal entity or agency of state, county, or municipal government, or agency of the federal government which is subject to the jurisdiction of the state.

(10) "Secretary" means the secretary of the state department of health.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-010, filed 6/7/99, effective 7/8/99; 91-02-051 (Order 124B), recodified as § 246-217-010, filed 12/27/90, effective 1/31/91; Regulation.87.002, effective 3/11/60.]

WAC 246-217-015 Applicability. (1) All food service workers must obtain a food worker card within fourteen calendar days from the beginning of employment at a food service establishment.

(2) In the case of temporary food service establishments, at a minimum the operator or person in charge each shift or during hours of operation shall have a valid food worker card obtained prior to the event.

(3) Employers at any food service establishment (permanent or temporary) must provide information or training regarding pertinent safe food handling practices to food service workers prior to beginning food handling duties if the worker does not hold a valid food worker card. Documentation that the information or training has been provided to the individual must be kept on file by the employer and be available for inspection by the health officer at all times.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-015, filed 6/7/99, effective 7/8/99.]

WAC 246-217-025 Issuance of food worker cards—Fees. (1) In order to qualify for issuance of an initial or renewal food worker card, an applicant must demonstrate his/her knowledge of safe food handling practices by satisfactorily completing an examination conducted by the local health officer or designee.

(2) Each applicant for a food worker card must pay a fee in the amount of ten dollars. The fee shall be used by the jurisdictional health department or designee to defray the costs of food worker training and education, administration of the program, and testing of applicants. Photographic identification may be required at the time of application.

(3) The local health officer or designee shall furnish to the applicant a copy of the latest edition of the "*Food and Beverage Service Workers' Manual*" or similar publication, as prepared or approved by the department.

(4) Effective January 1, 2000, prior to conducting the examination of the applicant(s), the health officer (or designee) shall provide at least thirty minutes of instruction, including both audio and visual presentations. Instruction content shall include topics related to safe food preparation, storage and service. At a minimum, topics shall include: Food borne illness overview; basic bacteriology as it relates to food borne illness; proper cooking, hot holding, cold holding and cooling of potentially hazardous foods; cross-contamination prevention; and proper hand washing techniques.

(5) The food worker card examination will be uniform statewide and will be prepared by and/or approved by the department; except that jurisdictional health departments may include additional questions to address local health concerns. The examination will cover topics identified in sub-

section (4) of this section, as required instruction topics. An exam must be approved by the department prior to its use. To pass the examination the applicant must answer at least eighty percent of the questions correctly.

(6) Upon payment of the required fee and the applicant's satisfactory completion of the examination, the applicant will receive the food worker card.

(7) A copy of the card or the applicable information shall be kept on file at the jurisdictional health department.

(8) Copies of food worker cards for all employed food service workers shall be kept on file by the employer or kept by the employee on his or her person and open for inspection at all times by authorized public health officials.

(9) All food worker cards shall be issued and signed by the local health officer. The local health officer may contract with persons to provide the required training or testing within his/her jurisdiction. The contracts shall include test security provisions so that test questions, scoring keys, and other examination data are exempt from public disclosure to the same extent as records maintained by state or local government agencies.

(10) The health officer or designee shall make test accommodations in accordance with the Americans with Disabilities Act for those requesting such accommodations.

[Statutory Authority: Chapter 69.06 RCW. 02-22-079, § 246-217-025, filed 11/5/02, effective 1/1/03. Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-025, filed 6/7/99, effective 7/8/99.]

WAC 246-217-035 Validity and form of food worker cards. (1) All initial cards are valid for two years from the date of issuance.

(2) Effective July 1, 1999, renewal cards are valid for three years from the date of issuance; except: An applicant may be granted a renewal card valid for five years from the date of issuance if the applicant documents that he/she has attended "additional food safety training" within the past two years.

(3) Any legally issued food worker card shall be valid throughout Washington state.

(4) Food service workers may apply for a renewal of a food worker card up to sixty days before the expiration date on their current valid card. Proof of a valid card must be shown at the time of renewal application.

(5) The card shall be approximately three inches by five inches in size and contain the following information:

(a) The identification of the card as a Washington state food worker card or "limited duty card," as applicable;

(b) The identity of the jurisdictional health department issuing the card;

(c) Printed (or typed written) name and signature of the food service worker;

(d) Card expiration date;

(e) Signature of the health officer; and

(f) Any other identifier or other information deemed necessary by the health officer.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-035, filed 6/7/99, effective 7/8/99.]

WAC 246-217-045 Limited duty food worker cards. The local health officer may issue a limited duty card when

(2003 Ed.)

necessary to reasonably accommodate a person with a disability.

(1) A person applying to obtain a limited duty card shall communicate to the local health officer which low public health risk activity(ies) (e.g., dishwashing, bussing tables, filling condiment containers, etc.) he or she will be performing.

(2) The health officer may require the applicant to attend the food safety training associated with the issuance of food worker cards. No written examination is required for the issuance of limited duty cards.

(3) The local health officer shall list the approved activity(ies) on the food worker card.

(4) The fee and length of validity of limited duty cards is the same as all other food worker cards.

(5) The employer should ensure that the individual is provided with information to safely perform the activity(ies) listed on the card.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-045, filed 6/7/99, effective 7/8/99.]

WAC 246-217-060 Revocation of food worker card. The food worker card may be revoked by the local health officer, or by the secretary, upon evidence indicating repeated or continuing violations of accepted procedures and practices in the preparation, service, or storage of food offered for public consumption, or upon demonstration of the presence of a communicable disease in the infectious state, or an infectious condition of potential hazard to the public or to the persons' co-workers, or for falsification of information required for issuance of the card. Any food service worker who has had his/her card revoked shall be ineligible for issuance of another card by any local health officer in the state until the conditions for revocation are appropriately resolved.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-060, filed 6/7/99, effective 7/8/99; 91-02-051 (Order 124B), recodified as § 246-217-060, filed 12/27/90, effective 1/31/91; Regulation.86.050, effective 3/11/60.]

WAC 246-217-070 Right of appeal. Any food service worker whose food worker card has been revoked by a local health officer, or the secretary, may appeal to the local board of health, or the department's office of professional standards consistent with chapter 246-10 WAC in the event such revocation is by the secretary, for review of the findings. The appeal must be in writing and must be filed with the appropriate board or office within ten days of revocation of the card. While the appeal is pending, the revocation of the card shall be stayed until such time as the appropriate board or office has reviewed the findings and entered its decision.

[Statutory Authority: RCW 43.20.050. 99-13-019, § 246-217-070, filed 6/7/99, effective 7/8/99; 91-02-051 (Order 124B), recodified as § 246-217-070, filed 12/27/90, effective 1/31/91; Regulation.86.060, effective 3/11/60.]

Chapter 246-220 WAC

RADIATION PROTECTION—GENERAL PROVISIONS

WAC

246-220-001
246-220-002
246-220-003

Authority.
Purpose.
Scope.

246-220-007	Statement of philosophy.
246-220-010	Definitions.
246-220-020	Records.
246-220-030	Inspections.
246-220-040	Tests and surveys.
246-220-050	Exemptions.
246-220-060	Violations.
246-220-070	Impounding.
246-220-080	Prohibited uses.
246-220-090	Communications.
246-220-100	Additional requirements.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-220-110	Appendix A—Determination of A ₁ and A ₂ values. [Statutory Authority: RCW 70.98.050. 95-01-108, § 246-220-110, filed 12/21/94, effective 1/21/95. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-200, filed 12/11/86; Order 1095, § 402-12-200, filed 2/6/76.] Repealed by 99-15-105, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050.
246-220-120	Appendix B—Information on transportation special form licensed material. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-120, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-210, filed 12/11/86; Order 1095, § 402-12-210, filed 2/6/76.] Repealed by 99-15-105, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050.
246-220-130	Appendix C—The international system of units (SI). [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-250, filed 12/8/80.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.

WAC 246-220-001 Authority. Rules and regulations set forth herein are adopted pursuant to the provisions of chapter 70.98 RCW.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-001, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-010, filed 2/6/76; Order 1, § 402-12-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-002 Purpose. It is the purpose of these regulations to state such requirements as shall be applied to the use of all ionizing radiation, radiation machines, and radioactive materials to ensure the maximum protection of the public health and the maximum safety to all persons at, or in the vicinity of, the place of use, storage, or disposal thereof. These regulations are intended to be consistent with the best use of radiation machines and radioactive materials.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-002, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-002, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-030, filed 12/11/86; Order 1095, § 402-12-030, filed 2/6/76; Order 1, § 402-12-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-003 Scope. Except as otherwise specifically provided, these regulations apply to all persons who receive, possess, use, transfer, own or acquire any source of

radiation, provided, however, that nothing in these regulations shall apply to any person to the extent such person is subject to regulation by the U.S. Nuclear Regulatory Commission.*

Note: *Attention is directed to the fact that regulation by the state of source material, by-product material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between the state and the U.S. Nuclear Regulatory Commission and to Part 150 of the commission's regulations (10 CFR Part 150).

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-003, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-040, filed 2/6/76; Order 1, § 402-12-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-007 Statement of philosophy. In accordance with the recommendations of the Environmental Protection Agency, formerly the Federal Radiation Council, approved by the president of the United States of America, persons engaged in activities under licenses issued by the Washington state department of health pursuant to the Atomic Energy Act of 1954, as amended, shall, in addition to complying with the requirements set forth in chapter 246-221 WAC, make every reasonable effort to maintain radiation exposures, and releases of radioactive materials in effluents to unrestricted areas, as low as is reasonably achievable. Such persons should make particular efforts to keep the radiation exposure of an embryo or fetus as low as is reasonably achievable during the entire gestation period as recommended by the National Council on Radiation Protection and Measurements. The term "as low as is reasonably achievable" means making every reasonable effort to maintain exposures to radiation as far below the dose limits in these regulations as is practical, consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of nuclear energy, ionizing radiation, and radioactive materials in the public interest.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-220-007, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-220-007, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-007, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-007, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-10-010, filed 12/8/80; Order 1095, § 402-10-010, filed 2/6/76.]

WAC 246-220-010 Definitions. As used in these regulations, these terms have the definitions set forth below. Additional definitions used only in a certain part will be found in that part.

(1) "Absorbed dose" means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the gray (Gy) and the rad.

(2) "Accelerator produced material" means any material made radioactive by exposing it in a particle accelerator.

(3) "Act" means Nuclear energy and radiation, chapter 70.98 RCW.

(4) "Activity" means the rate of disintegration or transformation or decay of radioactive material. The units of activity are the becquerel (Bq) and the curie (Ci).

(5) "Adult" means an individual eighteen or more years of age.

(6) "Agreement state" means any state with which the United States Nuclear Regulatory Commission has entered into an effective agreement under section 274 b. of the Atomic Energy Act of 1954, as amended (73 Stat. 689).

(7) "Airborne radioactive material" means any radioactive material dispersed in the air in the form of particulates, dusts, fumes, mists, vapors, or gases.

(8) "Airborne radioactivity area" means a room, enclosure, or operating area in which airborne radioactive material exists in concentrations (a) in excess of the derived air concentration (DAC) specified in WAC 246-221-290, Appendix A, or (b) to such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or twelve DAC-hours.

(9) "Air purifying respirator" means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

(10) "Alert" means events may occur, are in progress, or have occurred that could lead to a release of radioactive material but that the release is not expected to require a response by offsite response organizations to protect persons offsite.

(11) "Annual limit on intake" (ALI) means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the reference man that would result in a committed effective dose equivalent of 0.05 Sv (5 rem) or a committed dose equivalent of 0.5 Sv (50 rem) to any individual organ or tissue. ALI values for intake by ingestion and by inhalation of selected radionuclides are given in WAC 246-221-290.

(12) "Assigned protection factor" (APF) means the expected workplace level of respiratory protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

(13) "Atmosphere-supplying respirator" means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

(14) "Background radiation" means radiation from cosmic sources; naturally occurring radioactive materials, including radon, except as a decay product of source or special nuclear material, and including global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee. "Background radiation" does not include sources of radiation from radioactive materials regulated by the department.

(15) "Becquerel" (Bq) means the SI unit of activity. One becquerel is equal to 1 disintegration or transformation per second (s^{-1}).

(16) "Bioassay" means the determination of kinds, quantities or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement, in vivo counting, or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these regulations, "radiobioassay" is an equivalent term.

(17) "Byproduct material" means: (a) Any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (b) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition.

(18) "Calendar quarter" means not less than twelve consecutive weeks nor more than fourteen consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. No licensee or registrant shall change the method of determining calendar quarters for purposes of these regulations except at the beginning of a calendar year.

(19) "Calibration" means the determination of (a) the response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or (b) the strength of a source of radiation relative to a standard.

(20) "CFR" means Code of Federal Regulations.

(21) "Class" means a classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times: For Class D, Days, of less than ten days, for Class W, Weeks, from ten to one hundred days, and for Class Y, Years, of greater than one hundred days. For purposes of these regulations, "lung class" and "inhalation class" are equivalent terms. For "class of waste" see WAC 246-249-040.

(22) "Collective dose" means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

(23) "Committed dose equivalent" ($H_{T,50}$) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the fifty-year period following the intake.

(24) "Committed effective dose equivalent" ($H_{E,50}$) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($H_{E,50} = \sum w_T H_{T,50}$).

(25) "Constraint" or dose constraint means a value above which specified licensee actions are required.

(26) "Controlled area." See "Restricted area."

(27) "Curie" means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of 3.7×10^{10} transformations per second (tps).

(28) "Declared pregnant woman" means a woman who has voluntarily informed the licensee or registrant, in writing, of her pregnancy, and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

(29) "Deep dose equivalent" (H_d), which applies to external whole body exposure, means the dose equivalent at a tissue depth of 1 centimeter (1000 mg/cm^2).

(30) "Demand respirator" means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

(31) "Department" means the department of health, division of radiation protection, which has been designated as the state radiation control agency.

(32) "Depleted uranium" means the source material uranium in which the isotope Uranium-235 is less than 0.711 percent by weight of the total uranium present. Depleted uranium does not include special nuclear material.

(33) "Derived air concentration" (DAC) means the concentration of a given radionuclide in air which, if breathed by the reference man for a working year of two thousand hours under conditions of light work, results in an intake of one ALI. For purposes of these regulations, the condition of light work is an inhalation rate of 1.2 cubic meters of air per hour for two thousand hours in a year. DAC values are given in WAC 246-221-290.

(34) "Derived air concentration-hour" (DAC-hour) means the product of the concentration of radioactive material in air, expressed as a fraction or multiple of the derived air concentration for each radionuclide, and the time of exposure to that radionuclide, in hours. A licensee or registrant may take two thousand DAC-hours to represent one ALI, equivalent to a committed effective dose equivalent of 0.05 Sv (5 rem).

(35) "Disposable respirator" means a respirator for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage, or end-of-service-life renders it unsuitable for use. Examples of this type of respirator are a disposable half-mask respirator or a disposable escape-only self-contained breathing apparatus (SCBA).

(36) "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these regulations, "radiation dose" is an equivalent term.

(37) "Dose commitment" means the total radiation dose to a part of the body that will result from retention in the body of radioactive material. For purposes of estimating the dose commitment, it is assumed that from the time of intake the period of exposure to retained material will not exceed fifty years.

(38) "Dose equivalent" (H_T) means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.

(39) "Dose limits" means the permissible upper bounds of radiation doses established in accordance with these regulations. For purposes of these regulations, "limits" is an equivalent term.

(40) "Dosimetry processor" means a person that processes and evaluates individual monitoring devices in order to determine the radiation dose delivered to the monitoring devices.

(41) "dpm" means disintegrations per minute. See also "curie."

(42) "Effective dose equivalent" (H_E) means the sum of the products of the dose equivalent to each organ or tissue (H_T) and the weighting factor (w_T) applicable to each of the body organs or tissues that are irradiated ($H_E = \sum w_T H_T$).

(43) "Embryo/fetus" means the developing human organism from conception until the time of birth.

(44) "Entrance or access point" means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, without respect to their intended use.

(45) "Exposure" means (a) being exposed to ionizing radiation or to radioactive material, or (b) the quotient of ΔQ by Δm where " ΔQ " is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass " Δm " are completely stopped in air. The special unit of exposure is the roentgen (R) and the SI equivalent is the coulomb per kilogram. One roentgen is equal to 2.58×10^{-4} coulomb per kilogram of air.

(46) "Exposure rate" means the exposure per unit of time, such as roentgen per minute and milliroentgen per hour.

(47) "External dose" means that portion of the dose equivalent received from any source of radiation outside the body.

(48) "Extremity" means hand, elbow, arm below the elbow, foot, knee, and leg below the knee.

(49) "Filtering facepiece" (dust mask) means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

(50) "Fit factor" means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

(51) "Fit test" means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

(52) "Former United States Atomic Energy Commission (AEC) or United States Nuclear Regulatory Commission (NRC) licensed facilities" means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or criti-

cal mass experimental facilities where AEC or NRC licenses have been terminated.

(53) "Generally applicable environmental radiation standards" means standards issued by the United States Environmental Protection Agency (EPA) under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

(54) "Gray" (Gy) means the SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 joule/kilogram (100 rad).

(55) "Healing arts" means the disciplines of medicine, dentistry, osteopathy, chiropractic, podiatry, and veterinary medicine.

(56) "Helmet" means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

(57) "High radiation area" means any area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 1 mSv (0.1 rem) in one hour at 30 centimeters from any source of radiation or 30 centimeters from any surface that the radiation penetrates. For purposes of these regulations, rooms or areas in which diagnostic x-ray systems are used for healing arts purposes are not considered high radiation areas.

(58) "Hood" means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

(59) "Human use" means the intentional internal or external administration of radiation or radioactive material to human beings.

(60) "Immediate" or "immediately" means as soon as possible but no later than four hours after the initiating condition.

(61) "IND" means investigatory new drug for which an exemption has been claimed under the United States Food, Drug and Cosmetic Act (Title 21 CFR).

(62) "Individual" means any human being.

(63) "Individual monitoring" means the assessment of:

(a) Dose equivalent (i) by the use of individual monitoring devices or (ii) by the use of survey data; or

(b) Committed effective dose equivalent (i) by bioassay or (ii) by determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours.

(64) "Individual monitoring devices" (individual monitoring equipment) means devices designed to be worn by a single individual for the assessment of dose equivalent such as film badges, thermoluminescent dosimeters (TLDs), pocket ionization chambers, and personal ("lapel") air sampling devices.

(65) "Inspection" means an official examination or observation by the department including but not limited to, tests, surveys, and monitoring to determine compliance with rules, regulations, orders, requirements and conditions of the department.

(66) "Interlock" means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

(67) "Internal dose" means that portion of the dose equivalent received from radioactive material taken into the body.

(68) "Irretrievable source" means any sealed source containing licensed material which is pulled off or not connected to the wireline downhole and for which all reasonable effort at recovery, as determined by the department, has been expended.

(69) "Lens dose equivalent" (LDE) applies to the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeters (300 mg/cm²).

(70) "License" means a license issued by the department in accordance with the regulations adopted by the department.

(71) "Licensed material" means radioactive material received, possessed, used, transferred, or disposed under a general or specific license issued by the department.

(72) "Licensee" means any person who is licensed by the department in accordance with these regulations and the act.

(73) "Licensing state" means any state with regulations equivalent to the suggested state regulations for control of radiation relating to, and an effective program for, the regulatory control of NARM and which has been granted final designation by the Conference of Radiation Control Program Directors, Inc.

(74) "Loose-fitting facepiece" means a respiratory inlet covering that is designed to form a partial seal with the face.

(75) "Lost or missing licensed material" means licensed material whose location is unknown. This definition includes licensed material that has been shipped but has not reached its planned destination and whose location cannot be readily traced in the transportation system.

(76) "Member of the public" means an individual except when the individual is receiving an occupational dose.

(77) "Minor" means an individual less than eighteen years of age.

(78) "Monitoring" means the measurement of radiation, radioactive material concentrations, surface area activities or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these regulations, radiation monitoring and radiation protection monitoring are equivalent terms.

(79) "NARM" means any naturally occurring or accelerator-produced radioactive material. It does not include by-product, source, or special nuclear material. For the purpose of meeting the definition of a Licensing State by the Conference of Radiation Control Program Directors, Inc. (CRCPD), NARM refers only to discrete sources of NARM. Diffuse sources of NARM are excluded from consideration by the CRCPD for Licensing State designation purposes.

(80) "Natural radioactivity" means radioactivity of naturally occurring nuclides.

(81) "NDA" means a new drug application which has been submitted to the United States Food and Drug Administration.

(82) "Negative pressure respirator" (tight-fitting) means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

(83) "Nonstochastic effect" means a health effect, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect. For purposes of these regulations, a "deterministic effect" is an equivalent term.

(84) "Nuclear Regulatory Commission" (NRC) means the United States Nuclear Regulatory Commission or its duly authorized representatives.

(85) "Occupational dose" means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee, registrant, or other person. Occupational dose does not include dose received: From background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, from voluntary participation in medical research programs, or as a member of the public.

(86) "Ore refineries" means all processors of a radioactive material ore.

(87) "Particle accelerator" means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV.

(88) "Permittee" means a person who has applied for, and received, a valid site use permit for use of the low-level waste disposal facility at Hanford, Washington.

(89) "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof, and any legal successor, representative, agent or agency of the foregoing, but shall not include federal government agencies.

(90) "Personal supervision" means supervision such that the supervisor is physically present at the facility and in such proximity that contact can be maintained and immediate assistance given as required.

(91) "Personnel monitoring equipment." See individual monitoring devices.

(92) "Pharmacist" means an individual licensed by this state to compound and dispense drugs, and poisons.

(93) "Physician" means an individual licensed by this state to prescribe and dispense drugs in the practice of medicine.

(94) "Planned special exposure" means an infrequent exposure to radiation, separate from and in addition to the annual occupational dose limits.

(95) "Positive pressure respirator" means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

(96) "Powered air-purifying respirator" (PAPR) means an air-purifying respirator that uses a blower to force the

ambient air through air-purifying elements to the inlet covering.

(97) "Practitioner" means an individual licensed by the state in the practice of a healing art (i.e., physician, dentist, podiatrist, chiropractor, etc.).

(98) "Pressure demand respirator" means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

(99) "Public dose" means the dose received by a member of the public from exposure to sources of radiation under the licensee's or registrant's control or to radiation or radioactive material released by the licensee. Public dose does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, or from voluntary participation in medical research programs.

(100) "Qualified expert" means an individual who has demonstrated to the satisfaction of the department he/she has the knowledge, training, and experience to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs. The department reserves the right to recognize the qualifications of an individual in specific areas of radiation protection.

(101) "Qualitative fit test" (QLFT) means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

(102) "Quality factor" (Q) means the modifying factor, listed in Tables I and II, that is used to derive dose equivalent from absorbed dose.

TABLE I
QUALITY FACTORS AND ABSORBED DOSE EQUIVALENCIES

TYPE OF RADIATION	Quality Factor (Q)	Absorbed Dose Equal to A Unit Dose Equivalent ^a
X, gamma, or beta radiation and high-speed electrons	1	1
Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High-energy protons	10	0.1

^a Absorbed dose in rad equal to 1 rem or the absorbed dose in gray equal to 1 Sv.

If it is more convenient to measure the neutron fluence rate rather than to determine the neutron dose equivalent rate in sievert per hour or rem per hour as required for Table I, then 0.01 Sv (1 rem) of neutron radiation of unknown energies may, for purposes of these regulations, be assumed to result from a total fluence of 25 million neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the fluence rate per unit dose equivalent or the appropriate Q value from Table II to convert a measured tissue dose in gray or rad to dose equivalent in sievert or rem.

TABLE II

MEAN QUALITY FACTORS, Q, AND FLUENCE PER UNIT DOSE
EQUIVALENT FOR MONOENERGETIC NEUTRONS

Neutron Energy (MeV)	Quality Factor ^a (Q)	Fluence per Unit Dose Equivalent ^b (neutrons cm ⁻² rem ⁻¹)	Fluence per Unit Dose Equivalent ^b (neutrons cm ⁻² Sv ⁻¹)
(thermal) 2.5 x 10 ⁻⁸	2	980 x 10 ⁶	980 x 10 ⁸
1 x 10 ⁻⁷	2	980 x 10 ⁶	980 x 10 ⁸
1 x 10 ⁻⁶	2	810 x 10 ⁶	810 x 10 ⁸
1 x 10 ⁻⁵	2	810 x 10 ⁶	810 x 10 ⁸
1 x 10 ⁻⁴	2	840 x 10 ⁶	840 x 10 ⁸
1 x 10 ⁻³	2	980 x 10 ⁶	980 x 10 ⁸
1 x 10 ⁻²	2.5	1010 x 10 ⁶	1010 x 10 ⁸
1 x 10 ⁻¹	7.5	170 x 10 ⁶	170 x 10 ⁸
5 x 10 ⁻¹	11	39 x 10 ⁶	39 x 10 ⁸
1	11	27 x 10 ⁶	27 x 10 ⁸
2.5	9	29 x 10 ⁶	29 x 10 ⁸
5	8	23 x 10 ⁶	23 x 10 ⁸
7	7	24 x 10 ⁶	24 x 10 ⁸
10	6.5	24 x 10 ⁶	24 x 10 ⁸
14	7.5	17 x 10 ⁶	17 x 10 ⁸
20	8	16 x 10 ⁶	16 x 10 ⁸
40	7	14 x 10 ⁶	14 x 10 ⁸
60	5.5	16 x 10 ⁶	16 x 10 ⁸
1 x 10 ²	4	20 x 10 ⁶	20 x 10 ⁸
2 x 10 ²	3.5	19 x 10 ⁶	19 x 10 ⁸
3 x 10 ²	3.5	16 x 10 ⁶	16 x 10 ⁸
4 x 10 ²	3.5	14 x 10 ⁶	14 x 10 ⁸

^a Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-cm diameter cylinder tissue-equivalent phantom.

^b Monoenergetic neutrons incident normally on a 30-cm diameter cylinder tissue-equivalent phantom.

(103) "Quantitative fit test" (QNFT) means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

(104) "Quarter" means a period of time equal to one-fourth of the year observed by the licensee, approximately thirteen consecutive weeks, providing that the beginning of the first quarter in a year coincides with the starting date of the year and that no day is omitted or duplicated in consecutive quarters.

(105) "Rad" means the special unit of absorbed dose. One rad equals one-hundredth of a joule per kilogram of material; for example, if tissue is the material of interest, then 1 rad equals 100 ergs per gram of tissue. One rad is equal to an absorbed dose of 100 erg/gram or 0.01 joule/kilogram (0.01 gray).

(106) "Radiation" means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these regulations, ionizing radiation is an equivalent term. Radiation, as used in these regulations, does not include magnetic fields or nonionizing radiation, such as radiowaves or microwaves, visible, infrared, or ultraviolet light.

(107) "Radiation area" means any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.05 mSv (0.005 rem) in one hour at thirty centimeters from the source of radiation or from any surface that the radiation penetrates.

(108) "Radiation machine" means any device capable of producing ionizing radiation except those devices with radioactive materials as the only source of radiation.

(109) "Radiation safety officer" means an individual who has the knowledge and responsibility to apply appropriate radiation protection regulations and has been assigned such responsibility by the licensee or registrant.

(110) "Radiation source." See "Source of radiation."

(111) "Radioactive material" means any material (solid, liquid, or gas) which emits radiation spontaneously.

(112) "Radioactive waste" means any radioactive material which is no longer of use and intended for disposal or treatment for the purposes of disposal.

(113) "Radioactivity" means the transformation of unstable atomic nuclei by the emission of radiation.

(114) "Reference man" means a hypothetical aggregation of human physical and physiological characteristics determined by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base.

(115) "Registrable item" means any radiation machine except those exempted by RCW 70.98.180 or exempted by the department pursuant to the authority of RCW 70.98.080.

(116) "Registrant" means any person who is registered by the department or is legally obligated to register with the department in accordance with these regulations and the act.

(117) "Registration" means registration with the department in accordance with the regulations adopted by the department.

(118) "Regulations of the United States Department of Transportation" means the regulations in 49 CFR Parts 170-189, 14 CFR Part 103, and 46 CFR Part 146.

(119) "Rem" means the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 Sv).

(120) "Research and development" means: (a) Theoretical analysis, exploration, or experimentation; or (b) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and development does not include the internal or external administration of radiation or radioactive material to human beings.

(121) "Respiratory protective equipment" means an apparatus, such as a respirator, used to reduce an individual's intake of airborne radioactive materials.

(122) "Restricted area" means any area to which access is limited by the licensee or registrant for purposes of protecting individuals against undue risks from exposure to radiation and radioactive material. "Restricted area" shall not include any areas used for residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

(123) "Roentgen" (R) means the special unit of exposure. One roentgen equals 2.58 x 10⁻⁴ coulombs/kilogram of air.

(124) "Sanitary sewerage" means a system of public sewers for carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned or operated by the licensee or registrant.

(125) "Sealed source" means any radioactive material that is encased in a capsule designed to prevent leakage or the escape of the radioactive material.

(126) "Self-contained breathing apparatus" (SCBA) means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

(127) "Shallow dose equivalent" (H_s), which applies to the external exposure of the skin or an extremity, means the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm²) averaged over an area of 1 square centimeter.

(128) "SI" means an abbreviation of the International System of Units.

(129) "Sievert" means the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv = 100 rem).

(130) "Site area emergency" means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by offsite response organizations to protect persons offsite.

(131) "Site boundary" means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee or registrant.

(132) "Source container" means a device in which radioactive material is transported or stored.

(133) "Source material" means: (a) Uranium or thorium, or any combination thereof, in any physical or chemical form, or (b) ores which contain by weight one-twentieth of one percent (0.05 percent) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

(134) "Source material milling" means the extraction or concentration of uranium or thorium from any ore processing primarily for its source material content.

(135) "Source of radiation" means any radioactive material, or any device or equipment emitting or capable of producing ionizing radiation.

(136) "Special nuclear material" means:

(a) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the United States Nuclear Regulatory Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material; or

(b) Any material artificially enriched in any of the foregoing, but does not include source material.

(137) "Special nuclear material in quantities not sufficient to form a critical mass" means uranium enriched in the isotope U-235 in quantities not exceeding three hundred fifty grams of contained U-235; Uranium-233 in quantities not exceeding two hundred grams; Plutonium in quantities not exceeding two hundred grams; or any combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified

above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed "1" (i.e., unity). For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{175 \text{ (grams contained U-235)}}{350} + \frac{50 \text{ (grams U-233)}}{200} + \frac{50 \text{ (grams Pu)}}{200} < 1$$

(138) "Stochastic effect" means a health effect that occurs randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without threshold. Hereditary effects and cancer incidence are examples of stochastic effects. For purposes of these regulations, probabilistic effect is an equivalent term.

(139) "Supplied-air respirator" (SAR) or "airline respirator" means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

(140) "Survey" means an evaluation of the radiological conditions and potential hazards incident to the production, use, release, disposal, or presence of sources of radiation. When appropriate, such evaluation includes, but is not limited to, tests, physical examinations, calculations and measurements of levels of radiation or concentration of radioactive material present.

(141) "Test" means (a) the process of verifying compliance with an applicable regulation, or (b) a method for determining the characteristics or condition of sources of radiation or components thereof.

(142) "These regulations" mean all parts of the rules for radiation protection of the state of Washington.

(143) "Tight-fitting facepiece" means a respiratory inlet covering that forms a complete seal with the face.

(144) "Total effective dose equivalent" (TEDE) means the sum of the deep dose equivalent for external exposures and the committed effective dose equivalent for internal exposures.

(145) "Total organ dose equivalent" (TODE) means the sum of the deep dose equivalent and the committed dose equivalent to the organ or tissue receiving the highest dose.

(146) "United States Department of Energy" means the Department of Energy established by Public Law 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the department exercises functions formerly vested in the United States Atomic Energy Commission, its chairman, members, officers and components and transferred to the United States Energy Research and Development Administration and to the administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Public Law 93-438, October 11, 1974, 88 Stat. 1233 at 1237, 42 U.S.C. 5814 effective January 19, 1975) and retransferred to the Secretary of Energy pursuant to section

301(a) of the Department of Energy Organization Act (Public Law 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

(147) "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining.

(148) "Unrestricted area" (uncontrolled area) means any area which is not a restricted area. Areas where the external dose exceeds 2 mrem in any one hour or where the public dose, taking into account occupancy factors, will exceed 100 mrem total effective dose equivalent in any one year must be restricted.

(149) "User seal check" (fit check) means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

(150) "Very high radiation area" means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose in excess of 5 Gy (500 rad) in one hour at one meter from a source of radiation or one meter from any surface that the radiation penetrates.

(151) "Waste handling licensees" mean persons licensed to receive and store radioactive wastes prior to disposal and/or persons licensed to dispose of radioactive waste.

(152) "Week" means seven consecutive days starting on Sunday.

(153) "Weighting factor" w_T for an organ or tissue (T) means the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of w_T are:

ORGAN DOSE WEIGHTING FACTORS	
Organ or Tissue	w_T
Gonads	0.25
Breast	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	0.30 ^a
Whole Body	1.00 ^b

^a 0.30 results from 0.06 for each of 5 "remainder" organs, excluding the skin and the lens of the eye, that receive the highest doses.

^b For the purpose of weighting the external whole body dose, for adding it to the internal dose, a single weighting factor, $w_T = 1.0$, has been specified. The use of other weighting factors for external exposure will be approved on a case-by-case basis until such time as specific guidance is issued.

(154) "Whole body" means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.

(155) "Worker" means an individual engaged in activities under a license or registration issued by the department and controlled by a licensee or registrant but does not include the licensee or registrant. Where the licensee or registrant is an individual rather than one of the other legal entities

defined under "person," the radiation exposure limits for the worker also apply to the individual who is the licensee or registrant. If students of age eighteen years or older are subjected routinely to work involving radiation, then the students are considered to be workers. Individuals of less than eighteen years of age shall meet the requirements of WAC 246-221-050.

(156) "Working level" (WL) means any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of 1.3×10^5 MeV of potential alpha particle energy. The short-lived radon daughters are — for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

(157) "Working level month" (WLM) means an exposure to one working level for one hundred seventy hours — two thousand working hours per year divided by twelve months per year is approximately equal to one hundred seventy hours per month.

(158) "Year" means the period of time beginning in January used to determine compliance with the provisions of these regulations. The licensee or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-220-010, filed 2/21/01, effective 3/24/01; 00-08-013, § 246-220-010, filed 3/24/00, effective 4/24/00; 99-15-105, § 246-220-010, filed 7/21/99, effective 8/21/99; 98-13-037, § 246-220-010, filed 6/8/98, effective 7/9/98; 95-01-108, § 246-220-010, filed 12/21/94, effective 1/21/95; 94-01-073, § 246-220-010, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-050, filed 12/11/86; 83-19-050 (Order 2026), § 402-12-050, filed 9/16/83. Statutory Authority: Chapter 70.121 RCW. 81-16-031 (Order 1683), § 402-12-050, filed 7/28/81. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-050, filed 12/8/80; Order 1095, § 402-12-050, filed 2/6/76; Order 708, § 402-12-050, filed 8/24/72; Order 1, § 402-12-050, filed 7/2/71; Order 1, § 402-12-050, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-020 Records. (1) Each licensee or registrant shall maintain records relating to the receipt, use, storage, transfer, or disposal of radiation sources, and such other records as the department may require which will permit the determination of the extent of occupational and public exposure from such radiation sources. Copies of these records shall be submitted to the department on request. These requirements are subject to such exemptions as may be provided by department rules.

(2) In accordance with the Public Disclosure Act, the department shall make available to each licensee and/or registrant departmental records pertaining to that licensee or registrant, at his/her written request.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-080, filed 12/8/80; Order 1095, § 402-12-080, filed 2/6/76; Order 1, § 402-12-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-030 Inspections. (1) Each licensee and/or registrant shall afford the department at all reasonable times opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored.

(2) Each licensee and/or registrant shall make available to the department for inspection, upon reasonable notice, records maintained pursuant to these regulations.

(3) In accordance with the Public Disclosure Act, the department shall make available to each licensee and/or registrant a copy of every inspection report written which covers any inspection of the licensee's and/or registrant's source of radiation, records, premises, or facilities. Copies of these inspection records shall be submitted to the licensee or registrant by the department upon the receipt of the written request of the licensee and/or registrant.

(4) Any person who resists, impedes, or in any manner interferes with, any individual who performs inspections which are related to any activity or facility registration/license issued by the department is subject to immediate license and/or registration certificate revocation as well as applicable civil and criminal penalties.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-12-090, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-090, filed 12/8/80; Order 1095, § 402-12-090, filed 2/6/76; Order 1, § 402-12-090, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-040 Tests and surveys. (1) Each licensee and registrant shall perform upon instructions from the department or shall permit the department to perform such reasonable tests and surveys as the department deems appropriate or necessary including, but not limited to, tests and surveys of:

- (a) Sources of radiation;
- (b) Facilities wherein sources of radiation are used or stored;
- (c) Radiation detection and monitoring instruments; and
- (d) Other equipment and devices used in connection with utilization or storage of licensed or registered sources of radiation.

(2) In accordance with the Public Disclosure Act, the department shall provide to the licensee and/or registrant copies of all tests and surveys conducted on the licensee's and/or registrant's sources of radiation, upon written request of the licensee and/or registrant. The department shall acknowledge the receipt of the request in a timely manner by telephone or letter.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-100, filed 12/8/80; Order 1095, § 402-12-100, filed 2/6/76; Order 1, § 402-12-100, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-050 Exemptions. (1) The department may, upon application therefor or upon its own initiative, grant such exemptions or exceptions from the requirements of these regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or property.

[Title 246 WAC—p. 206]

(2) Any U.S. Department of Energy contractor or subcontractor and any U.S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this state is exempt from these regulations to the extent that such contractor or subcontractor under the applicable contract receives, possesses, uses, transfers or acquires sources of radiation:

(a) Prime contractors performing work for the Department of Energy at U.S. government-owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;

(b) Prime contractors of the Department of Energy performing research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof;

(c) Prime contractors of the Department of Energy using or operating nuclear reactors or other nuclear devices in a United States government-owned vehicle or vessel; and

(d) Any other prime contractor or subcontractor of the Department of Energy or of the Nuclear Regulatory Commission when the state and the Nuclear Regulatory Commission jointly determine (i) that the exemption of the prime contractor or subcontractor is authorized by law, and (ii) that under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-125, filed 12/8/80; Order 1095, § 402-12-125, filed 2/6/76.]

WAC 246-220-060 Violations. (1) An injunction or other court order may be obtained prohibiting any violation of any provision of the act or any regulation or order issued thereunder.

(2) Any person who violates any provision of the act or any regulation or order issued thereunder may be guilty of a gross misdemeanor and upon conviction, may be punished by fine or imprisonment or both, as provided by law.

(3) A person who knowingly provides to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to these regulations, may be individually subject to department enforcement action for deliberate misconduct.

(a) For the purposes of this subsection, "person" means:

- (i) A radioactive materials licensee;
- (ii) An applicant for a radioactive materials license;
- (iii) An employee of a radioactive materials licensee or applicant; or

(iv) Any contractor (including a supplier or consultant), subcontractor, or employee of a contractor or subcontractor of any radioactive materials licensee or applicant for a radioactive materials license.

(b) Persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a li-

censee's or applicant's activities subject to these regulations may not:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the department; or

(ii) Deliberately submit to the department, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the department.

(c) For the purposes of this section, deliberate misconduct by a person means an intentional act or omission that the person knows would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the department.

[Statutory Authority: RCW 70.98.050. 01-02-067, § 246-220-060, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-060, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-130, filed 2/6/76; Order 1, § 402-12-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-070 Impounding. Sources of radiation shall be subject to impoundment pursuant to RCW 70.98.-160.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-140, filed 12/11/86; Order 1095, § 402-12-140, filed 2/6/76; Order 1, § 402-12-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-080 Prohibited uses. (1) Hand-held fluoroscopic screens shall not be used unless listed in the Registry of Sealed Sources and Devices or accepted for certification by the United States Food and Drug Administration, Center for Devices and Radiological Health.

(2) Shoe-fitting fluoroscopic devices shall not be used.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-080, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-150, filed 2/6/76.]

WAC 246-220-090 Communications. All communications and reports concerning these regulations, and applications filed thereunder, should be addressed to the Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827. The emergency telephone number in Seattle, is 206-682-5327 or 206 (NUCLEAR).

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-12-160, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-160, filed 12/8/80; Order 1095, § 402-12-160, filed 2/6/76.]

WAC 246-220-100 Additional requirements. The department may, by rule, regulation, or order, impose upon any licensee or registrant such requirements in addition to those established in these regulations as it deems appropriate

(2003 Ed.)

or necessary to minimize danger to public health and safety or property.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-170, filed 12/8/80; Order 1095, § 402-12-170, filed 2/6/76.]

Chapter 246-221 WAC

RADIATION PROTECTION STANDARDS

WAC

246-221-001	Purpose and scope.
246-221-005	Radiation protection programs.
246-221-010	Occupational dose limits for adults.
246-221-015	Compliance with requirements for summation of external and internal doses.
246-221-020	Determination of prior occupational dose.
246-221-030	Requirements for planned special exposures.
246-221-040	Determination of internal exposure of individuals to concentrations of radioactive materials in restricted areas.
246-221-050	Occupational dose limits for minors.
246-221-055	Dose equivalent to an embryo/fetus.
246-221-060	Dose limits for individual members of the public.
246-221-070	Compliance with dose limits for individual members of the public.
246-221-080	Leak tests.
246-221-090	Personnel monitoring for external dose.
246-221-100	Personnel monitoring for internal dose.
246-221-102	Control of access to high radiation areas.
246-221-104	Control of access to very high radiation areas.
246-221-106	Control of access to very high radiation areas—Irradiators.
246-221-110	Surveys.
246-221-113	Use of process, engineering or other controls.
246-221-117	Use of individual respiratory protection equipment.
246-221-120	Caution signs, and labels.
246-221-130	Exceptions from posting and labeling requirements.
246-221-140	Instruction of personnel.
246-221-150	Security and control of stored radioactive material and radiation machines.
246-221-160	Procedures for picking up, receiving, and opening packages.
246-221-170	Waste disposal, general requirement.
246-221-180	Method of obtaining approval of proposed disposal procedures.
246-221-190	Disposal by release into sanitary sewerage systems.
246-221-200	Disposal by burial in soil.
246-221-210	Disposal by incineration.
246-221-220	Disposal of specific wastes.
246-221-230	Records important to radiation safety.
246-221-240	Reports of stolen, lost or missing radiation sources.
246-221-250	Notification of incidents.
246-221-260	Reports of overexposures and excessive levels and concentrations.
246-221-265	Special reports to the department—Planned special exposures and leaking sources.
246-221-270	Vacating premises and release of equipment.
246-221-275	Notification of changes in a facility.
246-221-280	Notifications and reports to individuals.
246-221-285	Assigned protection factors for respirators ^a .
246-221-290	Appendix A—Annual limits on intake (ALI) and derived air concentrations (DAC) of radionuclides for occupational exposure; effluent concentrations; concentrations for release to sanitary sewerage.
246-221-300	Appendix B—Minimum quantities of radioactive material requiring labeling.

WAC 246-221-001 Purpose and scope. (1) This chapter establishes standards for protection against radiation hazards. Except as otherwise specifically provided, this chapter applies to all licensees or registrants. The requirements of this chapter are designed to control the receipt, possession, use, transfer, and disposal of sources of radiation by any licensee or registrant so the total dose to an individual, including doses resulting from all sources of radiation other than back-

[Title 246 WAC—p. 207]

censee's or applicant's activities subject to these regulations may not:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the department; or

(ii) Deliberately submit to the department, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the department.

(c) For the purposes of this section, deliberate misconduct by a person means an intentional act or omission that the person knows would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the department.

[Statutory Authority: RCW 70.98.050. 01-02-067, § 246-220-060, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-060, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-130, filed 2/6/76; Order 1, § 402-12-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-070 Impounding. Sources of radiation shall be subject to impoundment pursuant to RCW 70.98.-160.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-140, filed 12/11/86; Order 1095, § 402-12-140, filed 2/6/76; Order 1, § 402-12-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-080 Prohibited uses. (1) Hand-held fluoroscopic screens shall not be used unless listed in the Registry of Sealed Sources and Devices or accepted for certification by the United States Food and Drug Administration, Center for Devices and Radiological Health.

(2) Shoe-fitting fluoroscopic devices shall not be used.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-080, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-150, filed 2/6/76.]

WAC 246-220-090 Communications. All communications and reports concerning these regulations, and applications filed thereunder, should be addressed to the Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827. The emergency telephone number in Seattle, is 206-682-5327 or 206 (NUCLEAR).

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-12-160, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-160, filed 12/8/80; Order 1095, § 402-12-160, filed 2/6/76.]

WAC 246-220-100 Additional requirements. The department may, by rule, regulation, or order, impose upon any licensee or registrant such requirements in addition to those established in these regulations as it deems appropriate

(2003 Ed.)

or necessary to minimize danger to public health and safety or property.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-170, filed 12/8/80; Order 1095, § 402-12-170, filed 2/6/76.]

Chapter 246-221 WAC

RADIATION PROTECTION STANDARDS

WAC

246-221-001	Purpose and scope.
246-221-005	Radiation protection programs.
246-221-010	Occupational dose limits for adults.
246-221-015	Compliance with requirements for summation of external and internal doses.
246-221-020	Determination of prior occupational dose.
246-221-030	Requirements for planned special exposures.
246-221-040	Determination of internal exposure of individuals to concentrations of radioactive materials in restricted areas.
246-221-050	Occupational dose limits for minors.
246-221-055	Dose equivalent to an embryo/fetus.
246-221-060	Dose limits for individual members of the public.
246-221-070	Compliance with dose limits for individual members of the public.
246-221-080	Leak tests.
246-221-090	Personnel monitoring for external dose.
246-221-100	Personnel monitoring for internal dose.
246-221-102	Control of access to high radiation areas.
246-221-104	Control of access to very high radiation areas.
246-221-106	Control of access to very high radiation areas—Irradiators.
246-221-110	Surveys.
246-221-113	Use of process, engineering or other controls.
246-221-117	Use of individual respiratory protection equipment.
246-221-120	Caution signs, and labels.
246-221-130	Exceptions from posting and labeling requirements.
246-221-140	Instruction of personnel.
246-221-150	Security and control of stored radioactive material and radiation machines.
246-221-160	Procedures for picking up, receiving, and opening packages.
246-221-170	Waste disposal, general requirement.
246-221-180	Method of obtaining approval of proposed disposal procedures.
246-221-190	Disposal by release into sanitary sewerage systems.
246-221-200	Disposal by burial in soil.
246-221-210	Disposal by incineration.
246-221-220	Disposal of specific wastes.
246-221-230	Records important to radiation safety.
246-221-240	Reports of stolen, lost or missing radiation sources.
246-221-250	Notification of incidents.
246-221-260	Reports of overexposures and excessive levels and concentrations.
246-221-265	Special reports to the department—Planned special exposures and leaking sources.
246-221-270	Vacating premises and release of equipment.
246-221-275	Notification of changes in a facility.
246-221-280	Notifications and reports to individuals.
246-221-285	Assigned protection factors for respirators ^a .
246-221-290	Appendix A—Annual limits on intake (ALI) and derived air concentrations (DAC) of radionuclides for occupational exposure; effluent concentrations; concentrations for release to sanitary sewerage.
246-221-300	Appendix B—Minimum quantities of radioactive material requiring labeling.

WAC 246-221-001 Purpose and scope. (1) This chapter establishes standards for protection against radiation hazards. Except as otherwise specifically provided, this chapter applies to all licensees or registrants. The requirements of this chapter are designed to control the receipt, possession, use, transfer, and disposal of sources of radiation by any licensee or registrant so the total dose to an individual, including doses resulting from all sources of radiation other than back-

[Title 246 WAC—p. 207]

ground radiation, does not exceed the standards for protection against radiation prescribed in this chapter.

(2) The limits in this chapter do not apply to doses due to background radiation, to exposure of patients to radiation for the purpose of medical diagnosis or therapy, to exposure from individuals administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, or to voluntary participation in medical research programs.

(3) Nothing in this chapter shall be interpreted as limiting actions that may be necessary to protect health and safety in an emergency.

(4) The definitions contained in WAC 246-220-010 also apply to this chapter. WAC 246-220-007, Statement of philosophy, is directly applicable to this chapter.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-221-001, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-001, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-001, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-010, filed 2/6/76; Order 1, § 402-24-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-005 Radiation protection programs.

(1) Each specific licensee shall develop, document, and implement a radiation protection program sufficient to ensure compliance with the provisions of this chapter.

(2) The licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).

(3) The licensee shall review the radiation protection program content and implementation at the frequency specified in the license.

(4) To implement the ALARA requirements of subsection (2) of this section, and notwithstanding the requirements of WAC 246-221-060, a constraint on air emission of radioactive material to the environment, excluding radon-220, radon-222 and their daughters, shall be established by licensees such that the individual member of the public likely to receive the highest dose will not be expected to receive a total effective dose equivalent in excess of 0.1 mSv (10 mrem) per year from these emissions. This dose constraint does not apply to sealed sources or to accelerators less than 200MeV. If a licensee subject to this requirement exceeds this dose constraint, the licensee shall report the exceedance as provided in WAC 246-221-260 and promptly take appropriate corrective action to ensure against recurrence.

(5) Each licensee shall maintain records of the radiation protection program, including:

(a) The provisions of the program; and

(b) Audits, where required, and other reviews of program content and implementation.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-005, filed 2/21/01, effective 3/24/01; 99-15-105, § 246-221-005, filed 7/21/99, effective 8/21/99; 94-01-073, § 246-221-005, filed 12/9/93, effective 1/9/94.]

WAC 246-221-010 Occupational dose limits for adults.

(1) The licensee or registrant shall control the occupational dose to individual adults, except for planned special

exposures pursuant to WAC 246-221-030, to the following dose limits:

(a) An annual limit, which is the more limiting of:

(i) The total effective dose equivalent being equal to 0.05 Sv (5 rem); or

(ii) The sum of the deep dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 0.50 Sv (50 rem).

(b) The annual limits to the lens of the eye, to the skin, and to the extremities which are:

(i) A lens dose equivalent of 0.15 Sv (15 rem); and

(ii) A shallow dose equivalent of 0.50 Sv (50 rem) to the skin or to any extremity.

(2) Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, must be subtracted from the limits specified in WAC 246-221-030 for planned special exposures that the individual may receive during the current year and during the individual's lifetime.

(3) The assigned deep dose equivalent and shallow dose equivalent shall be for the portion of the body receiving the highest exposure. The deep dose equivalent, lens dose equivalent and shallow dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.

(4) Derived air concentration (DAC) and annual limit on intake (ALI) values are specified in WAC 246-221-290 and may be used to determine the individual's dose and to demonstrate compliance with the occupational dose limits.

(5) Notwithstanding the annual dose limits, the licensee shall limit the soluble uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity.

(6) The licensee or registrant shall reduce the dose that an individual may be allowed to receive in the current year by the amount of occupational dose received while employed by any other person during the current year as determined in accordance with WAC 246-221-020.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-010, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-010, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-24-020, filed 12/11/86. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-020, filed 12/8/80; Order 1095, § 402-24-020, filed 2/6/76; Order 1, § 402-24-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-015 Compliance with requirements

for summation of external and internal doses. (1) If the licensee is required to monitor under both WAC 246-221-090 and 246-221-100, the licensee shall demonstrate compliance with the dose limits by summing external and internal doses. If the licensee is required to monitor only under WAC 246-221-090 or only under WAC 246-221-100, then summation is not required to demonstrate compliance with the dose limits. The licensee may demonstrate compliance with the requirements for summation of external and internal doses

under subsections (2), (3), and (4) of this section. The dose equivalents for the lens of the eye, the skin, and the extremities are not included in the summation, but are subject to separate limits.

(2) **Intake by inhalation.** If the only intake of radionuclides is by inhalation, the total effective dose equivalent limit is not exceeded if the sum of the deep dose equivalent divided by the total effective dose equivalent limit, and one of the following, does not exceed unity:

(a) The sum of the fractions of the inhalation ALI for each radionuclide; or

(b) The total number of derived air concentration-hours (DAC-hours) for all radionuclides divided by two thousand; or

(c) The sum of the calculated committed effective dose equivalents to all significantly irradiated organs or tissues (T) calculated from bioassay data using appropriate biological models and expressed as a fraction of the annual limit. For purposes of this requirement, an organ or tissue is deemed to be significantly irradiated if, for that organ or tissue, the product of the weighting factors, w_T , and the committed dose equivalent, $H_{T,50}$, per unit intake is greater than ten percent of the maximum weighted value of H_{50} , that is, $w_T H_{T,50}$, per unit intake for any organ or tissue.

(3) **Intake by oral ingestion.** If the occupationally exposed individual also receives an intake of radionuclides by oral ingestion greater than ten percent of the applicable oral ALI, the licensee shall account for this intake and include it in demonstrating compliance with the limits.

(4) **Intake through wounds or absorption through skin.** The licensee shall evaluate and, to the extent practical, account for intakes through wounds or skin absorption. The intake through intact skin has been included in the calculation of DAC for hydrogen-3 and does not need to be evaluated or accounted for pursuant to this section.

(5) **External dose from airborne radioactive material.** Licensees shall, when determining the dose from airborne radioactive material, include the contribution to the deep dose equivalent, lens dose equivalent, and shallow dose equivalent from external exposure to the radioactive cloud. Airborne radioactivity measurements and DAC values shall not be used as the primary means to assess the deep dose equivalent when the airborne radioactive material includes radionuclides other than noble gases or if the cloud of airborne radioactive material is not relatively uniform. The determination of the deep dose equivalent to an individual shall be based upon measurements using instruments or individual monitoring devices.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-015, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-015, filed 12/9/93, effective 1/9/94.]

WAC 246-221-020 Determination of prior occupational dose. (1) For each individual who is likely to receive, in a year, an occupational dose requiring monitoring pursuant to WAC 246-221-090 and 246-221-100, the licensee or registrant shall:

(a) Determine the occupational radiation dose received during the current year; and

(b) Attempt to obtain the records of lifetime cumulative occupational radiation dose.

(2) Prior to permitting an individual to participate in a planned special exposure, the licensee or registrant shall determine:

(a) The internal and external doses from all previous planned special exposures; and

(b) All doses in excess of the limits, including doses received during accidents and emergencies, received during the lifetime of the individual.

(3) In complying with the requirements of subsection (1) of this section, a licensee or registrant may:

(a) Accept, as a record of the occupational dose that the individual received during the current year, a written signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual received during the current year; and

(b) Accept, as the record of lifetime cumulative radiation dose, an up-to-date Form RHF-4A, or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant; and

(c) Obtain reports of the individual's dose equivalent from the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant, by telephone, telegram, facsimile, or letter. The licensee or registrant shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.

(4) The licensee or registrant shall record the exposure history, as required by subsection (1) of this section, on Form RHF-4A, or other clear and legible record, of all the information required on that form. The form or record shall show each period in which the individual received occupational exposure to radiation or radioactive material and shall be signed by the individual who received the exposure. For each period for which the licensee or registrant obtains reports, the licensee or registrant shall use the dose shown in the report in preparing Form RHF-4A. For any period in which the licensee or registrant does not obtain a report, the licensee or registrant shall place a notation on Form RHF-4A indicating the periods of time for which data are not available.

(5) Licensees or registrants are not required to reevaluate the separate external dose equivalents and internal committed dose equivalents or intakes of radionuclides assessed under the regulations in effect before January 1, 1994. Further, occupational exposure histories obtained and recorded on Form RHF-4 before January 1, 1994, would not have included effective dose equivalent, but may be used in the absence of specific information on the intake of radionuclides by the individual.

(6) If the licensee or registrant is unable to obtain a complete record of an individual's current and previously accumulated occupational dose, the licensee or registrant shall assume:

(a) In establishing administrative controls under WAC 246-221-010(6) for the current year, that the allowable dose limit for the individual is reduced by 12.5 mSv (1.25 rem) for

each calendar quarter for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure; and

(b) That the individual is not available for planned special exposures.

(7) The licensee or registrant shall retain the records on Form RHF-4A or equivalent until the department terminates each pertinent license requiring this record. The licensee or registrant shall retain records used in preparing Form RHF-4 or RHF-4A for three years after the record is made.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-221-020, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-221-020, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-024, filed 12/8/80; Order 1095, § 402-24-024, filed 2/6/76.]

WAC 246-221-030 Requirements for planned special exposures. A licensee or registrant may authorize an adult worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in WAC 246-221-010 provided that each of the following conditions is satisfied:

(1) The licensee or registrant authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated to result from the planned special exposure are unavailable or impractical.

(2) The licensee or registrant, and employer if the employer is not the licensee or registrant, specifically authorizes the planned special exposure, in writing, before the exposure occurs.

(3) Before a planned special exposure, the licensee or registrant ensures that each individual involved is:

(a) Informed of the purpose of the planned operation; and

(b) Informed of the estimated doses and associated potential risks and specific radiation levels or other conditions that might be involved in performing the task; and

(c) Instructed in the measures to be taken to keep the dose ALARA considering other risks that may be present.

(4) Prior to permitting an individual to participate in a planned special exposure, the licensee or registrant ascertains prior doses as required by WAC 246-221-020(2) during the lifetime of the individual for each individual involved.

(5) Subject to WAC 246-221-010(2), the licensee or registrant shall not authorize a planned special exposure that would cause an individual to receive a dose from all planned special exposures and all doses in excess of the limits to exceed:

(a) The numerical values of any of the dose limits in WAC 246-221-010(1) in any year; and

(b) Five times the annual dose limits in WAC 246-221-010(1) during the individual's lifetime.

(6) The licensee or registrant maintains records that describe:

(a) The exceptional circumstances requiring the use of a planned special exposure;

(b) The name of the management official who authorized the planned special exposure and a copy of the signed authorization;

(c) What actions were necessary;

(d) Why the actions were necessary;

(e) What precautions were taken to assure that doses were maintained ALARA; and

(f) What individual and collective doses were expected to result.

(7) The licensee or registrant records the best estimate of the dose resulting from the planned special exposure in the individual's record and informs the individual, in writing, of the dose within thirty days from the date of the planned special exposure. The dose from planned special exposures shall not be considered in controlling future occupational dose of the individual under WAC 246-221-010(1) but shall be included in evaluations required by subsections (4) and (5) of this section.

(8) The licensee or registrant submits a written report in accordance with WAC 246-221-265.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-030, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-027, filed 12/8/80.]

WAC 246-221-040 Determination of internal exposure of individuals to concentrations of radioactive materials in restricted areas. For purposes of assessing dose used to determine compliance with occupational dose equivalent limits, the licensee shall, when required under WAC 246-221-100, take suitable and timely measurements of:

(a) Concentrations of radioactive materials in air in work areas; or

(b) Quantities of radionuclides in the body; or

(c) Quantities of radionuclides excreted from the body; or

(d) Combinations of these measurements.

(2) Unless respiratory protective equipment is used, as provided in WAC 246-221-117, or the assessment of intake is based on bioassays, the licensee shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.

(3) When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior or the material in an individual is known, the licensee may:

(a) Use that information to calculate the committed effective dose equivalent, and, if used, the licensee shall document that information in the individual's record; and

(b) Upon prior approval of the department, adjust the DAC or ALI values to reflect the actual physical and chemical characteristics of airborne radioactive material, for example, aerosol size distribution or density; and

(c) Separately assess the contribution of fractional intakes of Class D, W, or Y compounds of a given radionuclide to the committed effective dose equivalent. See WAC 246-221-290.

(4) If the licensee chooses to assess intakes of Class Y material using the measurements given in subsection (1)(b) or (c) of this section, the licensee may delay the recording and reporting of the assessments for periods up to seven months, unless otherwise required by WAC 246-221-250 or 246-221-260. This delay permits the licensee to make additional measurements basic to the assessments.

(5) If the identity and concentration of each radionuclide in a mixture are known, the fraction of the DAC applicable to the mixture for use in calculating DAC-hours shall be either:

(a) The sum of the ratios of the concentration to the appropriate DAC value, that is, D, W, or Y, from WAC 246-221-290 for each radionuclide in the mixture; or

(b) The ratio of the total concentration for all radionuclides in the mixture to the most restrictive DAC value for any radionuclide in the mixture.

(6) If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.

(7) When a mixture of radionuclides in air exists, a licensee may disregard certain radionuclides in the mixture if:

(a) The licensee uses the total activity of the mixture in demonstrating compliance with the dose limits in WAC 246-221-010 and in complying with the monitoring requirements in WAC 246-221-100; and

(b) The concentration of any radionuclide disregarded is less than ten percent of its DAC; and

(c) The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed thirty percent.

(8) When determining the committed effective dose equivalent, the following information may be considered:

(a) In order to calculate the committed effective dose equivalent, the licensee may assume that the inhalation of one ALI, or an exposure of 2,000 DAC-hours, results in a committed effective dose equivalent of 0.05 Sv (5 rem) for radionuclides that have their ALIs or DACs based on the committed effective dose equivalent.

(b) For an ALI and the associated DAC determined by the nonstochastic organ dose limit of 0.50 Sv (50 rem), the intake of radionuclides that would result in a committed effective dose equivalent of 0.05 Sv (5 rem), that is, the stochastic ALI, is listed in parentheses in Table I of WAC 246-221-290. The licensee may, as a simplifying assumption, use the stochastic ALIs to determine committed effective dose equivalent. However, if the licensee uses the stochastic ALIs, the licensee shall also demonstrate that the limit in WAC 246-221-010 (1)(a)(ii) is met.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-030, filed 12/8/80; Order 1095, § 402-24-030, filed 2/6/76; Order 1, § 402-24-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-050 Occupational dose limits for minors. No licensee or registrant shall possess, use, or trans-

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fer sources of radiation in such a manner as to cause any occupationally exposed individual who is under 18 years of age, to receive a dose in excess of 10 percent of the annual occupational dose limits specified in WAC 246-221-010(1).

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-050, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-035, filed 12/8/80; Order 1095, § 402-24-035, filed 2/6/76.]

WAC 246-221-055 Dose equivalent to an embryo/fetus. (1) The licensee or registrant shall ensure that the dose equivalent to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 5 mSv (0.5 rem).

(2) Once pregnancy has been declared, the licensee or registrant shall make every effort to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman in order to satisfy the limit in subsection (1) of this section.

(3) If by the time the woman declares pregnancy to the licensee or registrant, the dose equivalent to the embryo/fetus has exceeded 4.5 mSv (0.45 rem), the licensee or registrant shall be deemed to be in compliance with subsection (1) of this section if the additional dose equivalent to the embryo/fetus does not exceed 0.50 mSv (0.05 rem) during the remainder of the pregnancy.

(4) The dose equivalent to an embryo/fetus shall be taken as the sum of:

(a) The deep dose equivalent to the declared pregnant woman; and

(b) The dose equivalent to the embryo/fetus from radionuclides in the embryo/fetus and radionuclides in the declared pregnant woman.

(5) The licensee or registrant shall maintain the records of dose equivalent to an embryo/fetus with the records of dose equivalent to the declared pregnant woman. The declaration of pregnancy, including the estimated date of conception, shall also be kept on file, but may be maintained separately from the dose records.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-055, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-055, filed 12/9/93, effective 1/9/94.]

WAC 246-221-060 Dose limits for individual members of the public. (1) Each licensee or registrant shall conduct operations so that:

(a) The total effective dose equivalent to individual members of the public from the licensed or registered operation does not exceed 1 mSv (0.1 rem) in a year, exclusive of the dose contributions from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, from voluntary participation in medical research programs, and from the licensee's or registrant's disposal of radioactive material into sanitary sewerage in accordance with WAC 246-221-190; and

[Title 246 WAC—p. 211]

(b) The dose in any unrestricted area from external sources, exclusive of the dose contributions from patients administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, does not exceed 0.02 mSv (0.002 rem) in any one hour.

(2) If the licensee or registrant permits members of the public to have access to restricted areas, they shall be escorted and the limits for members of the public continue to apply to those individuals.

(3) Notwithstanding subsection (1) of this section, a licensee or registrant may continue to operate a facility constructed and put into operation prior to January 1, 1994, where the annual dose limit for an individual member of the public is more than 1 mSv (0.1 rem) and less than 5 mSv (0.5 rem) total effective dose equivalent, provided:

(a) The facility's approved operating conditions for each radiation source remain the same. Any increase in the following operating conditions shall require reevaluation and/or modification of the facility shielding applicable to the source of radiation to meet the 1 mSv (0.1 rem) total effective dose equivalent limit for individual members of the public: size of the radiation source, workload, or occupancy factors associated with the source of radiation; and

(b) Any change in the permanent shielding of the facility due to remodeling, repair or replacement shall require the facility to meet the 1 mSv (0.1 rem) total effective dose equivalent limit for individual members of the public for areas affected by that portion of the shielding.

(4) Each licensee or registrant shall maintain records sufficient to demonstrate compliance with the dose limit for individual members of the public.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-221-060, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-060, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-040, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-040, filed 12/8/80; Order 1095, § 402-24-040, filed 2/6/76; Order 1, § 402-24-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-070 Compliance with dose limits for individual members of the public. (1) The licensee shall make or cause to be made surveys of radiation levels in unrestricted areas and radioactive materials in effluents released to unrestricted areas to demonstrate compliance with the dose limits for individual members of the public in WAC 246-221-060.

(2) A licensee shall show compliance with the annual dose limit in WAC 246-221-060 by:

(a) Demonstrating by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed operation does not exceed the annual dose limit; or

(b) Demonstrating that:

(i) The annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area do not exceed the values specified in Table II of WAC 246-221-290; and

(ii) If an individual were continually present in an unrestricted area, the dose from external sources would not exceed 0.02 mSv (0.002 rem) in an hour and 0.50 mSv (0.05 rem) in a year.

(3) Upon approval from the department, the licensee may adjust the effluent concentration values in WAC 246-221-290, Table II, for members of the public, to take into account the actual physical and chemical characteristics of the effluents, such as, aerosol size distribution, solubility, density, radioactive decay equilibrium, and chemical form.

(4) The provisions of this section do not apply to disposal of radioactive material into sanitary sewerage systems, which is governed by WAC 246-221-190.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-070, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-050, filed 12/11/86; Order 1095, § 402-24-050, filed 2/6/76; Order 1, § 402-24-050, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-080 Leak tests. (1) Each sealed radioactive source possessed under the provisions of a specific license, other than hydrogen-3 (tritium), with a half-life greater than thirty days and in any form other than gas, shall be tested and results obtained for leakage and/or contamination prior to initial use and at six-month intervals or as specified by the license, except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months. If at any other time there is reason to suspect that a sealed source might have been damaged, it shall be tested for leakage and results obtained before further use. In the absence of a certificate from a transferor indicating that a test for leakage has been made within six months prior to the transfer (three months for a source designed to emit alpha particles), the sealed source shall not be put into use until tested and the results received.

(2) Leak tests shall be capable of detecting the presence of 185 Bq (0.005 microcurie) of removable contamination. The results of leak tests made pursuant to subsection (1) of this section shall be recorded in units of becquerel or microcuries and shall be maintained for inspection by the department. Any test conducted pursuant to subsection (1) which reveals the presence of 185 Bq (0.005 microcurie) or more of removable contamination shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the source from use shall take action to prevent the spread of contamination and shall cause it to be decontaminated and repaired or to be disposed in accordance with WAC 246-232-080. If a sealed source shows evidence of leaking, a report shall be filed with the department within five days of the test, describing the equipment involved, the test results, and the corrective action taken.

(3) Test samples shall be taken from the sealed source or from the internal surfaces or the opening of the container in which the sealed source is stored or from surfaces of devices or equipment in which the sealed source is permanently mounted. Tests for contamination and leakage may be made by wiping appropriate accessible surfaces on which one might expect contamination to accumulate and measuring

these wipes for transferred contamination. Test samples shall also be taken from the interior surfaces of the container in which a sealed source of radium is stored.

(4) Leak tests are required for sealed radioactive sources that are greater than 3.7 MBq (100 microcuries) for beta and gamma emitting sources and greater than 370 KBq (10 microcuries) for sources designed to emit alpha particles.

(5) Tests for leakage or contamination shall be performed by persons specifically authorized by the department, an agreement state, a licensing state, or the United States Nuclear Regulatory Commission to perform such services.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-24-060, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-060, filed 12/8/80; Order 1095, § 402-24-060, filed 2/6/76; Order 1, § 402-24-060, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-090 Personnel monitoring for external dose. Each licensee or registrant shall monitor occupational exposure from sources of radiation at levels sufficient to demonstrate compliance with the occupational dose limits of WAC 246-221-010, 246-221-030, 246-221-050 and 246-221-055.

(1) Each licensee or registrant shall monitor occupational exposure to radiation from licensed (or registered) and unlicensed (or unregistered) radiation sources under the control of the licensee or registrant and shall supply and shall require the use of individual monitoring devices by:

(a) Each adult likely to receive, in one year from sources external to the body, a dose in excess of ten percent of the applicable limits specified in WAC 246-221-010(1).

(b) Each minor likely to receive, in one year from sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem), a lens dose equivalent in excess of 1.5 mSv (0.15 rem), or a shallow dose equivalent to the skin or to the extremities in excess of 5 mSv (0.5 rem).

(c) Each declared pregnant woman likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem). All of the occupational dose limits specified in WAC 246-221-010 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.

(d) Each individual who enters a high or very high radiation area.

(2) Personnel monitoring devices assigned to an individual:

(a) Shall not intentionally be exposed to give a false or erroneous reading;

(b) Shall be assigned to one individual per exposure interval (i.e., weekly, monthly) and used to determine exposure for that individual only;

(c) Shall not be worn by any individual other than that individual originally assigned to the device;

(d) Personnel monitoring devices that are exposed while not being worn by the assigned individual shall be processed and recorded as soon as possible. A replacement monitoring

device shall be assigned to the individual immediately. A record of the circumstances of the exposure shall be retained.

(3) All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremities, that require processing to determine the radiation dose and that are utilized by licensees or registrants to comply with subsection (1) of this section, with other applicable provisions of chapters 246-220 through 246-255 WAC, or with conditions specified in a licensee's license must be processed and evaluated by a dosimetry processor:

(a) Holding current personnel dosimetry accreditation from either the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology (formerly known as the National Bureau of Standards) or the United States Department of Energy Laboratory Accreditation Program for Personnel Dosimetry Systems (DOELAP); and

(b) Approved in this accreditation process for the type of radiation or radiations included in the NVLAP or DOELAP program that most closely approximate the type of radiation or radiations for which the individual wearing the dosimeter is monitored.

(4) For the purposes of this section "dosimetry processor" means an individual or an organization that processes and evaluates personnel monitoring devices in order to determine the radiation dose delivered to the device.

(5) Each licensee or registrant shall maintain records of doses received by all individuals for whom monitoring was required under subsection (1) of this section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:

(a) The deep dose equivalent to the whole body, lens dose equivalent, shallow dose equivalent to the skin, and shallow dose equivalent to the extremities; and

(b) The total effective dose equivalent when required by WAC 246-221-015; and

(c) The total of the deep dose equivalent and the committed dose to the organ receiving the highest total dose (total organ dose equivalent).

(6) The licensee or registrant shall maintain the records specified in subsection (5) of this section on department Form RHF-5A, in accordance with the instructions provided on the form, or in clear and legible records containing all the information required by Form RHF-5A; and shall update the information at least annually.

(7) Each licensee or registrant shall ensure that individuals, for whom they are required to monitor occupational doses in accordance with subsection (1) of this section, wear individual monitoring devices as follows:

(a) An individual monitoring device used for monitoring the dose to the whole body shall be worn at the unshielded or least shielded location of the whole body likely to receive the highest exposure. When a protective apron is worn, the location of the individual monitoring device is typically at the neck (collar).

(b) Any additional individual monitoring device used for monitoring the dose to an embryo/fetus of a declared pregnant woman, pursuant to WAC 246-221-055(1), shall be located at the waist under any protective apron being worn by the woman.

(c) An individual monitoring device used for monitoring the lens dose equivalent, to demonstrate compliance with WAC 246-221-010 (1)(b)(i), shall be located at the neck (collar), outside any protective apron being worn by the monitored individual, or at an unshielded location closer to the eye.

(d) An individual monitoring device used for monitoring the dose to the extremities, to demonstrate compliance with WAC 246-221-010 (1)(b)(ii), shall be worn on the extremity likely to receive the highest exposure. Each individual monitoring device shall be oriented to measure the highest dose to the extremity being monitored.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-090, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 92-06-008 (Order 245), § 246-221-090, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-070, filed 12/8/80; Order 1095, § 402-24-070, filed 2/6/76; Order 708, § 402-24-070, filed 8/24/72; Order 1, § 402-24-070, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-100 Personnel monitoring for internal dose. (1) Each licensee shall monitor, to determine compliance with WAC 246-221-040, the occupational intake of radioactive material by and assess the committed effective dose equivalent to:

(a) Adults likely to receive, in 1 year, an intake in excess of ten percent of the applicable ALI in Table I, Columns 1 and 2, of WAC 246-221-290;

(b) Minors likely to receive, in one year, a committed effective dose equivalent in excess of 1 mSv (0.1 rem); and

(c) Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 1 mSv (0.1 rem).

(2) Where necessary or desirable in order to aid in determining the extent of an individual's exposure to concentrations of radioactive material, the department may incorporate license provisions or issue an order requiring a licensee or registrant to make available to the individual appropriate bioassay services and to furnish a copy of the reports of such services to the department.

(3) Each licensee shall maintain records of doses received by all individuals for whom monitoring was required pursuant to subsections (1) and (2) of this section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:

(a) The estimated intake or body burden of radionuclides;

(b) The committed effective dose equivalent assigned to the intake or body burden of radionuclides;

(c) The specific information used to calculate the committed effective dose equivalent pursuant to WAC 246-221-040;

(d) The total effective dose equivalent when required by WAC 246-221-015; and

(e) The total of the deep dose equivalent and the committed dose to the organ receiving the highest total dose (total organ dose equivalent).

(4) The licensee or registrant shall maintain the records specified in subsection (3) of this section on department Form RHF-5A, in accordance with the instructions provided on the form, or in clear and legible records containing all the information required by Form RHF-5A; and shall update the information at least annually.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-100, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-100, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-100, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-080, filed 2/6/76; Order 1, § 402-24-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-102 Control of access to high radiation areas. (1) The licensee or registrant shall ensure that each entrance or access point to a high radiation area has one or more of the following features:

(a) A control device that, upon entry into the area, causes the level of radiation to be reduced below that level at which an individual might receive a deep dose equivalent of 1 mSv (0.1 rem) in one hour at thirty centimeters from the source of radiation or from any surface that the radiation penetrates; or

(b) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; or

(c) Entryways that are locked, except during periods when access to the areas is required, with positive control over each individual entry.

(2) In place of the controls required by subsection (1) of this section for a high radiation area, the licensee or registrant may substitute continuous direct or electronic surveillance that is capable of preventing unauthorized entry.

(3) The licensee or registrant may apply to the department for approval of alternative methods for controlling access to high radiation areas.

(4) The licensee or registrant shall establish the controls required by subsections (1) and (3) of this section in a way that does not prevent individuals from leaving a high radiation area.

(5) The licensee is not required to control each entrance or access point to a room or other area that is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the United States Department of Transportation provided that:

(a) The packages do not remain in the area longer than three days; and

(b) The dose rate at one meter from the external surface of any package does not exceed 0.1 mSv (0.01 rem) per hour.

(6) The licensee is not required to control entrance or access to rooms or other areas in hospitals solely because of the presence of patients containing radioactive material, pro-

vided that there are personnel in attendance who are taking the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the established limits and to operate within the ALARA provisions of the licensee's radiation protection program.

(7) The licensee or registrant is not required to control entrance or access to rooms or other areas as described in this section if the licensee or registrant has met all the specific requirements for access and control specified in other applicable chapters of these regulations, such as, chapter 246-243 WAC for industrial radiography, chapter 246-225 WAC for x-rays in the healing arts, and chapter 246-229 WAC for particle accelerators.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-102, filed 12/9/93, effective 1/9/94.]

WAC 246-221-104 Control of access to very high radiation areas. (1) In addition to the requirements in WAC 246-221-102, the licensee or registrant shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at five Gy (500 rad) or more in one hour at one meter from a source of radiation or any surface through which the radiation penetrates. This requirement does not apply to rooms or areas in which diagnostic x-ray systems are the only source of radiation, or to nonself-shielded irradiators.

(2) The licensee or registrant is not required to control entrance or access to rooms or other areas containing sources of radiation capable of producing a very high radiation area as described in this section if the licensee or registrant has met all the specific requirements for access and control specified in other applicable chapters of these regulations, such as, chapter 246-243 WAC for industrial radiography, chapter 246-225 WAC for x-rays in the healing arts, and chapter 246-229 WAC for particle accelerators.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-104, filed 12/9/93, effective 1/9/94.]

WAC 246-221-106 Control of access to very high radiation areas—Irradiators. (1) This section applies to licensees or registrants with sources of radiation in nonself-shielded irradiators. This section does not apply to sources of radiation that are used in teletherapy, in industrial radiography, or in completely self-shielded irradiators in which the source of radiation is both stored and operated within the same shielding radiation barrier and, in the designed configuration of the irradiator, is always physically inaccessible to any individual and cannot create a radiation level of five Gy (500 rad) or more in one hour at one meter in an area that is accessible to any individual.

(2) Each area in which there may exist radiation levels in excess of five Gy (500 rad) in one hour at one meter from a source of radiation that is used to irradiate materials shall meet the following requirements:

(a) Each entrance or access point shall be equipped with entry control devices which:

(i) Function automatically to prevent any individual from inadvertently entering a very high radiation area; and

(ii) Permit deliberate entry into the area only after a control device is actuated that causes the radiation level within the area, from the source of radiation, to be reduced below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour; and

(iii) Prevent operation of the source of radiation if it would produce radiation levels in the area that could result in a deep dose equivalent to an individual in excess of one mSv (0.1 rem) in one hour.

(b) Additional control devices shall be provided so that, upon failure of the entry control devices to function as required by (a) of this subsection:

(i) The radiation level within the area, from the source of radiation, is reduced below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour; and

(ii) Conspicuous visible and audible alarm signals are generated to make an individual attempting to enter the area aware of the hazard and at least one other authorized individual, who is physically present, familiar with the activity, and prepared to render or summon assistance, aware of the failure of the entry control devices.

(c) The licensee or registrant shall provide control devices so that, upon failure or removal of physical radiation barriers other than the sealed source's shielded storage container:

(i) The radiation level from the source of radiation is reduced below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour; and

(ii) Conspicuous visible and audible alarm signals are generated to make potentially affected individuals aware of the hazard and the licensee or registrant or at least one other individual, who is familiar with the activity and prepared to render or summon assistance, aware of the failure or removal of the physical barrier.

(d) When the shield for stored sealed sources is a liquid, the licensee shall provide means to monitor the integrity of the shield and to signal, automatically, loss of adequate shielding.

(e) Physical radiation barriers that comprise permanent structural components, such as walls, that have no credible probability of failure or removal in ordinary circumstances need not meet the requirements of (c) and (d) of this subsection.

(f) Each area shall be equipped with devices that will automatically generate conspicuous visible and audible alarm signals to alert personnel in the area before the source of radiation can be put into operation and in time for any individual in the area to operate a clearly identified control device, which must be installed in the area and which can prevent the source of radiation from being put into operation.

(g) Each area shall be controlled by use of such administrative procedures and such devices as are necessary to ensure that the area is cleared of personnel prior to each use of the source of radiation.

(h) Each area shall be checked by a radiation measurement to ensure that, prior to the first individual's entry into the area after any use of the source of radiation, the radiation

level from the source of radiation in the area is below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour.

(i) Entry and exit portals that are used in transporting materials to and from the irradiation area, and that are not intended for use by individuals, shall be controlled by such devices and administrative procedures as are necessary to physically protect and warn against inadvertent entry by any individual through these portals. Exit portals for irradiated materials shall be equipped to detect and signal the presence of any loose radioactive material that is carried toward such an exit and automatically to prevent loose radioactive material from being carried out of the area.

(3) The entry control devices required in subsection (2)(a) of this section shall be tested for proper functioning:

(a) Prior to initial operation with the source of radiation on any day, unless operations were continued uninterrupted from the previous day; and

(b) Prior to resumption of operation of the source of radiation after any unintentional interruption; and

(c) In accordance with a schedule for periodic tests of the entry control and warning systems submitted by the licensee or registrant and approved by the department.

(4) The licensee or registrant shall not conduct operations, other than those necessary to place the source of radiation in safe condition or to effect repairs on controls, unless control devices are functioning properly.

(5) Licensees, registrants, or applicants for licenses or registrations for sources of radiation within the purview of subsection (2) of this section which will be used in a variety of positions or in locations, such as open fields or forests, that make it impracticable to comply with certain requirements of subsection (2) of this section, such as those for the automatic control of radiation levels, may apply to the department for approval of alternative safety measures. Alternative safety measures shall provide personnel protection at least equivalent to those specified in subsection (2) of this section. At least one of the alternative measures shall include an entry-preventing interlock control based on a measurement of the radiation that ensures the absence of high radiation levels before an individual can gain access to the area where such sources of radiation are used.

(6) The entry control devices required by subsections (2) and (3) of this section shall be established in such a way that no individual will be prevented from leaving the area.

(7) The licensee shall maintain records of tests made pursuant to subsection (3) of this section on entry control devices for very high radiation areas. These records shall include the date, time, and results of each such test of function.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-106, filed 12/9/93, effective 1/9/94.]

WAC 246-221-110 Surveys. (1) Each licensee or registrant shall make or cause to be made such surveys, as defined in WAC 246-220-010, as may be necessary for the licensee or registrant to establish compliance with these regulations and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and potential radiation hazards. Records of such surveys shall be preserved as specified

in WAC 246-221-230. Information on performing surveys may be found in the United States Nuclear Regulatory Commission's Regulatory Guide 8.23.

(2) The licensee shall ensure that instruments and equipment used for quantitative radiation measurements, for example, dose rate and effluent monitoring, are calibrated annually at intervals not to exceed thirteen months for the radiation measured.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-110, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-110, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-110, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-085, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-085, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-085, filed 12/8/80; Order 1095, § 402-24-085, filed 2/6/76.]

WAC 246-221-113 Use of process, engineering or other controls. (1) The licensee shall use, to the extent practical, process or other engineering controls, such as, containment, decontamination, or ventilation, to control the concentrations of radioactive material in air.

(2) When it is not practical to apply process or other engineering controls to control the concentrations of radioactive material in air to values below those that define an airborne radioactivity area, the licensee shall, consistent with maintaining the total effective dose equivalent ALARA, increase monitoring and limit intakes by one or more of the following means:

- (a) Control of access;
- (b) Limitation of exposure times;
- (c) Use of respiratory protection equipment; or
- (d) Other controls.

(3) If the licensee performs an ALARA analysis to determine whether or not respirators should be used, the licensee may consider safety factors other than radiological factors. The licensee should also consider the impact of respirator use on workers' industrial health and safety.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-113, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-113, filed 12/9/93, effective 1/9/94.]

WAC 246-221-117 Use of individual respiratory protection equipment. If the licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material:

(1) The licensee shall use only respiratory protection equipment that is:

(a) Tested and certified by the National Institute for Occupational Safety and Health (NIOSH); or

(b) Approved by the department on the basis of the licensee's submittal of an application for authorized use of other respiratory protection equipment, including a demonstration by testing, or a demonstration on the basis of reliable test information, that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use.

(2) The licensee shall implement and maintain a respiratory protection program that includes:

(a) Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate exposures;

(b) Surveys and bioassays, as appropriate, to evaluate actual intakes;

(c) Testing of respirators for operability (user seal check for face sealing devices and functional check for others) immediately prior to each use;

(d) Written procedures regarding:

(i) Monitoring, including air sampling and bioassays;

(ii) Supervision and training of respirator users;

(iii) Fit testing;

(iv) Respirator selection;

(v) Breathing air quality;

(vi) Inventory and control;

(vii) Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;

(viii) Recordkeeping; and

(ix) Limitations on periods of respirator use and relief from respirator use;

(e) Determination by a physician that the individual user is medically fit to use respiratory protection equipment:

(i) Before the initial fitting of a face sealing respirator;

(ii) Before the first field use of nonface sealing respirators; and

(iii) Either every twelve months thereafter, or periodically at a frequency determined by a physician; and

(f) Fit testing, with a fit factor greater than or equal to ten times the APF for negative pressure devices, and a fit factor greater than or equal to five hundred for any positive pressure, continuous flow, and pressure-demand devices, before the first field use of tight fitting, face sealing respirators, and periodically thereafter at a frequency not to exceed one year. Fit testing must be performed with the facepiece operating in the negative pressure mode.

(3) The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other conditions that might require relief.

(4) The licensee shall also consider limitations appropriate to the type and mode of use. When selecting respiratory devices the licensee shall provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in such a way as not to interfere with the proper operation of the respirator.

(5) Standby rescue persons are required whenever one-piece atmosphere-supplying suits, or any combination of supplied air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself. The standby persons must be equipped with respiratory protection devices or other apparatus appropriate for the potential hazards. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, signal line, telephone, radio, or other suitable means), and be immediately available to assist them in case

(2003 Ed.)

of a failure of the air supply or for any other reason that requires relief from distress. A sufficient number of standby rescue persons must be immediately available to assist all users of this type of equipment and to provide effective emergency rescue if needed.

(6) Atmosphere-supplying respirators must be supplied with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of the Occupational Safety and Health Administration (29 CFR 1910.134 (i)(1)(ii)(A) through (E)). Grade D quality air criteria include:

(a) Oxygen content (v/v) of 19.5-23.5%;

(b) Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;

(c) Carbon monoxide (CO) content of 10 ppm or less;

(d) Carbon dioxide content of 1,000 ppm or less; and

(e) Lack of noticeable odor.

(7) The licensee shall ensure that no objects, materials or substances, such as facial hair, or any conditions that interfere with the face-to-facepiece seal or valve function, and that are under the control of the respirator wearer, are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator facepiece.

(8) In estimating the dose to individuals from intake of airborne radioactive materials, the concentration of radioactive material in the air that is inhaled when respirators are worn is initially assumed to be the ambient concentration in air without respiratory protection, divided by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the corrected value must be used. If the dose is later found to be less than the estimated dose, the corrected value may be used.

(9) The department may impose restrictions in addition to the provisions of this section, WAC 246-221-113 and 246-221-285, in order to:

(a) Ensure that the respiratory protection program of the licensee is adequate to limit doses to individuals from intakes of airborne radioactive materials consistent with maintaining total effective dose equivalent ALARA; and

(b) Limit the extent to which a licensee may use respiratory protection equipment instead of process or other engineering controls.

(10) The licensee shall obtain authorization from the department before using assigned protection factors in excess of those specified in WAC 246-221-285. The department may authorize a licensee to use higher assigned protection factors on receipt of an application that:

(a) Describes the situation for which a need exists for higher protection factors; and

(b) Demonstrates that the respiratory protection equipment provides these higher protection factors under the proposed conditions of use.

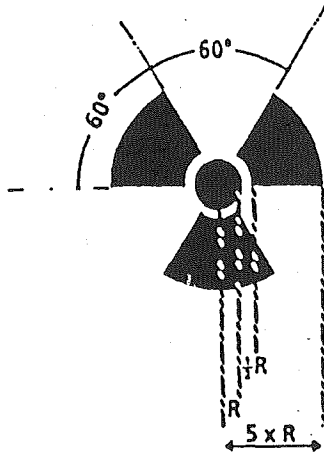
[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-117, filed 2/21/01, effective 3/24/01; 98-13-034, § 246-221-117, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-117, filed 12/9/93, effective 1/9/94.]

WAC 246-221-120 Caution signs, and labels. (1) The radiation symbol shall be used on all signs, labels, or other

[Title 246 WAC—p. 217]

written means of warning individuals concerning radiation hazards.

(a) The symbol prescribed by this section is the conventional three-blade design: Radiation symbol



(b) The symbol prescribed by this section shall be:

- (i) Magenta, purple, or black on a yellow background; or
- (ii) Conspicuously etched or stamped without regard to a color requirement on sources, source holders or device components containing sources which are subjected to extreme environmental conditions which would cause the color to deteriorate.

(2) The conventional radiation symbol as described in subsection (1) of this section shall be used only for:

(a) Instructing individuals to be cognizant of a potential radiation hazard as prescribed in subsections (4) through (10) of this section.

(b) Indicating that information presented pertains to the topic of radiation.

(3) In addition to the contents of signs and labels prescribed in this section, a licensee or registrant may provide on or near such signs and labels any additional information which may be appropriate in aiding individuals to minimize exposure to radiation.

(4) Each *radiation area* and entrance thereto shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - RADIATION AREA. However, in an exceptionally large room where other activities of a nonradiological nature are conducted the entrance need not be posted provided a conspicuous barricade with an appropriate number of signs is established to delineate the radiation area.

(5) Each high radiation area and all entrances thereto shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - HIGH RADIATION AREA or DANGER - HIGH RADIATION AREA. To avoid unnecessary exposure, the licensee or registrant may satisfy this requirement by posting the sign at the estimated location or vicinity of the high radiation area.

(6) Each very high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution sym-

bol and the words: GRAVE DANGER - VERY HIGH RADIATION AREA. To avoid unnecessary exposure, the licensee or registrant may satisfy this requirement by posting the sign at the estimated location or vicinity of the very high radiation area.

(7) Each airborne radioactivity area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - AIRBORNE RADIOACTIVITY AREA or DANGER - AIRBORNE RADIOACTIVITY AREA.

(8) Each area or room in which any radioactive material is used or stored in an amount exceeding 10 times the quantity of radioactive material specified in WAC 246-221-300 shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - RADIOACTIVE MATERIAL or DANGER - RADIOACTIVE MATERIAL.

(9) Each container of radioactive material shall bear a durable, clearly visible label identifying the radioactive contents including:

(a) The radiation caution symbol and the words: CAUTION* - RADIOACTIVE MATERIAL or DANGER - RADIOACTIVE MATERIAL.

(b) Sufficient information to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures, such as radionuclides present, radiation levels, estimate of activity and mass enrichment.

(c) Where containers are used for storage, the quantities and kinds of radioactive materials in the containers and the date of measurement of the quantities.

(10) All radiation machines shall be labeled in a conspicuous manner so as to caution individuals that radiation is produced when the machine is being operated.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-120, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-090, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-090, filed 12/8/80; Order 1095, § 402-24-090, filed 2/6/76; Order 1, § 402-24-090, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-130 Exceptions from posting and labeling requirements.

(1) A room or area is not required to be posted with a caution sign because of the presence of a sealed source, provided the radiation level 30 centimeters from the surface of the source container or housing does not exceed 0.05 mSv (five millirem) per hour.

(2) Rooms or other areas in hospitals that are occupied by patients are not required to be posted with caution signs because of the presence of patients containing radioactive material provided that the patient could be released from licensee control pursuant to chapters 246-239 and 246-240 WAC.

(3) Caution signs are not required to be posted in areas or rooms containing radioactive material for periods of less than eight hours provided that:

(a) The material is constantly attended during such periods by an individual who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in this part; and

(b) Such area or room is subject to the licensee's or registrant's control.

(4) A room or other area is not required to be posted with a caution sign because of the presence of radioactive material prepared for transport and packaged and labeled in accordance with regulations of the United States Department of Transportation.

(5) A room or area is not required to be posted with a caution sign because of the presence of a diagnostic x-ray system used solely for healing arts purposes.

(6) The interior of a teletherapy room is not required to be posted with caution signs provided such posting is conspicuously placed at the entrance(s) to the rooms.

(7) A licensee is not required to label:

(a) Containers holding licensed material in quantities less than the quantities listed in WAC 246-221-300; or

(b) Containers holding licensed material in concentrations less than those specified in WAC 246-221-290, Table III; or

(c) Containers attended by an individual who takes the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established by this chapter; or

(d) Containers when they are in transport and packaged and labeled in accordance with the regulations of the United States Department of Transportation; or

(e) Containers such as those located in water-filled canals, storage vaults, or hot cells, that are accessible only to individuals authorized to handle or use them, or to work in the vicinity of the containers, provided the contents are identified to these individuals by a readily available written record. The record shall be retained as long as the containers are in use for the purpose indicated on the record; or

(f) Installed manufacturing or process equipment, such as chemical process equipment, piping, and tanks.

(8) Each licensee, prior to removal or disposal of empty uncontaminated containers to unrestricted areas, shall remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-221-130, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-095, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-095, filed 12/8/80; Order 1095, § 402-24-095, filed 2/6/76.]

WAC 246-221-140 Instruction of personnel. Instructions required for individuals working in or frequenting any portion of a restricted area are specified in WAC 246-222-020, 246-222-030, and 246-222-040.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-110, filed 9/16/83; Order 1095, § 402-24-110, filed 2/6/76; Order 708, § 402-24-110, filed 8/24/72; Order 1, § 402-24-110, filed 7/2/71; Order 1, § 402-24-110, filed 1/8/69; Rules (part), filed 10/26/66.]

(2003 Ed.)

WAC 246-221-150 Security and control of stored radioactive material and radiation machines. (1) Licensed radioactive materials and registered radiation machines shall be secured from, or controlled in such a manner so as to prevent, unauthorized access or removal from the place of storage.

(2) Licensed radioactive materials in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee.

(3) Registered radiation machines in an unrestricted area and not in storage shall be under the control of the registrant.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-150, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-120, filed 9/16/83; Order 1095, § 402-24-120, filed 2/6/76; Order 1, § 402-24-120, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-160 Procedures for picking up, receiving, and opening packages. (1)(a) Each licensee who expects to receive a package containing quantities of radioactive material in excess of the Type A₁ or A₂ quantities specified in WAC 246-231-200 shall make arrangements to receive:

(i) The package when it is offered for delivery by the carrier; or

(ii) Immediate notification from the carrier of the arrival of the package at the carrier's terminal.

(b) Each licensee who picks up a package of radioactive material from a carrier's terminal shall pick up the package expeditiously upon receipt of notification from the carrier of its arrival.

(2) Each licensee shall:

(a) Monitor for radioactive contamination the external surfaces of any package labeled with a Radioactive White I, Yellow II or Yellow III label unless the package contains only radioactive material in the form of gas or in special form as defined in WAC 246-231-010; and

(b) Monitor the radiation levels of the external surfaces of any package labeled with a Radioactive White I, Yellow II or Yellow III label unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, as defined in WAC 246-231-200; and

(c) Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if the package has evidence of potential contamination, such as packages that are crushed, wet, or damaged.

(3) The monitoring shall be performed:

(a) Immediately upon receipt if there is evidence of package degradation or any other evidence of potential contamination or excessive radiation levels; or

(b) As soon as practicable after receipt, but no later than three hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or no later than three hours from the beginning of the next working day if received after normal working hours.

(4) The licensee shall immediately notify the final delivery carrier and, by telephone and telegram, mailgram, or facsimile, the department when:

[Title 246 WAC—p. 219]

(a) For normal shipments, removable radioactive surface contamination exceeds either 22 dpm/cm² for beta-gamma emitting radionuclides, all radionuclides with half-lives less than ten days, natural uranium, natural thorium, uranium-235, uranium-238, thorium-232, and thorium-228 and thorium 230 when contained in ores or concentrates; or 2.2 dpm/cm² for all other alpha emitting radionuclides; or

(b) For exclusive use shipments, removable radioactive surface contamination exceeds either 220 dpm/cm² for beta-gamma emitting radionuclides, all radionuclides with half-lives less than ten days, natural uranium, natural thorium, uranium-235, uranium-238, thorium-232, and thorium-228 and thorium 230 when contained in ores or concentrates; or 22 dpm/cm² for all other alpha emitting radionuclides; or

(c) For normal or exclusive use shipments, external radiation levels exceed two mSv/hour (200 millirem per hour) at any point on the external surface of the package; or

(d) For exclusive use shipments where the shipment is made in a closed transport vehicle, packages are secured in a fixed position, and no loading or unloading occurs between the beginning and end of transportation, external radiation levels exceed ten mSv/hour (1000 millirem per hour) at any point on the external surface of the package.

(5) Each licensee shall establish and maintain procedures for safely opening packages in which radioactive material is received, and shall assure that such procedures are followed and that due consideration is given to instructions for the type of package being opened and the monitoring of potentially contaminated packaging material (including packages containing radioactive material in gaseous form) to assure that only background levels of radiation are present prior to disposal of such material as nonradioactive waste.

(6) Licensees transferring special form sources to and from a work site in vehicles owned or operated by the licensee are exempt from the contamination monitoring requirements of subsection (2)(a) of this section but are not exempt from the monitoring requirement in subsection (2)(b) of this section for measuring radiation levels to ensure that the source is still properly lodged in its shield.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-221-160, filed 7/21/99, effective 8/21/99; 94-01-073, § 246-221-160, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-160, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-24-125, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-125, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-125, filed 12/8/80; Order 1095, § 402-24-125, filed 2/6/76.]

WAC 246-221-170 Waste disposal, general requirement. (1) No licensee shall dispose of any radioactive material except:

(a) By transfer to an authorized recipient as provided in WAC 246-232-080, or chapter 246-249 WAC; or

(b) As authorized pursuant to WAC 246-221-070, 246-221-180, 246-221-190, 246-221-200, 246-221-210, or 246-221-220.

(c) By decay in storage as authorized in a specific license.

[Title 246 WAC—p. 220]

(2) A person shall be specifically licensed to receive waste containing licensed material from other persons for:

(a) Treatment prior to disposal; or

(b) Treatment or disposal by incineration; or

(c) Decay in storage; or

(d) Disposal at a land disposal facility licensed pursuant to chapter 246-250 WAC; or

(e) Storage until transferred to a disposal facility authorized to receive the waste.

(3) Nothing in chapter 246-221 WAC relieves the licensee from complying with other applicable federal, state, and local regulations governing any other toxic or hazardous properties of materials that may be disposed pursuant to this chapter.

(4) Each licensee shall maintain records of all transfers and disposals of radioactive material. Requirements for the disposition of certain disposal records, prior to license termination, are located in WAC 246-232-060.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-221-170, filed 7/21/99, effective 8/21/99; 94-01-073, § 246-221-170, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-170, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-130, filed 12/8/80; Order 1095, § 402-24-130, filed 2/6/76; Order 1, § 402-24-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-180 Method of obtaining approval of proposed disposal procedures. Any person may apply to the department for approval of proposed procedures to dispose of radioactive material in a manner not otherwise authorized in this chapter. Each application shall contain a description of the radioactive material, including the quantities and kinds of radioactive material and levels of radioactivity involved, the physical and chemical properties that have an impact on risk evaluation, and the proposed manner and conditions of disposal. The application, where appropriate, shall also include an analysis and evaluation of pertinent information as to the nature of the environment, including topographical, geological, meteorological, and hydrological characteristics; usage of ground and surface waters in the general area; the nature and location of other potentially affected facilities; analyses and procedures to ensure that doses are maintained ALARA within the dose limits of this chapter; and procedures to be observed to minimize the risk of unexpected or hazardous exposures.

The department will not approve any application for a license to receive radioactive material from other persons for disposal on land not owned by a state or the federal government.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-180, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-24-135, filed 12/11/86; Order 1095, § 402-24-135, filed 2/6/76.]

WAC 246-221-190 Disposal by release into sanitary sewerage systems. (1) No licensee shall discharge radioactive material into a sanitary sewerage system unless:

(a) It is readily soluble or it is biological material which is readily dispersible in water;

(b) The quantity of any radioactive material released in any one month, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in WAC 246-221-290, Table III; and

(c) The sum of the fractions for each radionuclide, if more than one radionuclide is released, will not exceed unity; where the fraction for each radionuclide is determined by dividing the actual monthly average concentration of each radionuclide released by the licensee into the sewer by the concentration of that radionuclide listed in Table III of WAC 246-221-290; and

(d) The total quantity of licensed and other radioactive material that the licensee releases into the sanitary sewerage system in a year does not exceed 185 GBq (5 Ci) of hydrogen-3, 37 GBq (1 Ci) of carbon-14, and 37 GBq (1 Ci) of all other radioactive materials combined.

(2) Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this section.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-190, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-190, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-140, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-140, filed 12/8/80; Order 1095, § 402-24-140, filed 2/6/76; Order 1, § 402-24-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-200 Disposal by burial in soil. No licensee shall dispose of radioactive material by burial in soil except as specifically approved by the department pursuant to WAC 246-221-180.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-200, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-150, filed 12/8/80; Order 1095, § 402-24-150, filed 2/6/76; Order 1, § 402-24-150, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-210 Disposal by incineration. No licensee shall incinerate radioactive material for the purpose of disposal or preparation for disposal except as specifically approved by the department pursuant to WAC 246-221-070 and 246-221-180.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-210, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-210, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-160, filed 2/6/76; Order 1, § 402-24-160, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-220 Disposal of specific wastes. (1) Any licensee may dispose of the following licensed material without regard to its radioactivity:

(a) 1.85 KBq (0.05 microcuries) or less of hydrogen-3 or carbon-14, per gram of medium, used for liquid scintillation counting; and

(b) 1.85 KBq (0.05 microcuries) or less of hydrogen-3 or carbon-14, per gram of animal tissue averaged over the weight of the entire animal.

(2003 Ed.)

(2) The licensee shall not dispose of tissue under this section in a manner that would permit its use either as food for humans or as animal feed; and

(3) Nothing in this section, however, relieves the licensee of maintaining records showing the receipt, transfer and disposal of such byproduct material as specified in WAC 246-220-020; and

(4) Nothing in this section relieves the licensee from complying with other applicable federal, state and local regulations governing any other toxic or hazardous property of these materials.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-220, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-220, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-165, filed 9/16/83.]

WAC 246-221-230 Records important to radiation safety. (1) Each licensee or registrant shall make and retain records of activities, program reviews, measurements, and calculations which may be necessary to determine the extent of occupational and public exposure from sources of radiation under the control of the licensee or registrant.

(2) Each record required by this section shall be legible throughout the specified retention period.

(3) Each licensee or registrant shall use the SI units: Becquerel, gray, sievert and coulomb per kilogram, or the special units: Curie, rad, rem, and roentgen, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by these regulations.

(4) The licensee or registrant shall make a clear distinction among the quantities entered on the records required by these regulations such as, total effective dose equivalent, total organ dose equivalent, shallow dose equivalent, lens dose equivalent, deep dose equivalent, or committed effective dose equivalent.

(5) Records which must be maintained under this part shall be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by department regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Electronic media data storage systems shall incorporate standard or universally recognized security measures. Records, such as letters, drawings, and specifications, shall include all pertinent information, such as stamps, initials, and signatures.

(6) The licensee shall maintain adequate safeguards against tampering with and loss of records.

(7) The licensee or registrant shall retain the following required records until the department terminates each pertinent license or registration requiring the record, and upon termination of the license or registration, the licensee or registrant shall store for at least thirty years:

(a) Records of prior occupational dose and exposure history as recorded on department Form RHF-4 or RHF-4A, or equivalent;

[Title 246 WAC—p. 221]

(b) Records on department Form RHF-5 or RHF-5A, or equivalent, of doses received by all individuals for whom monitoring was required pursuant to WAC 246-221-090 and 246-221-100;

(c) Records of doses received during planned special exposures, accidents, and emergency conditions;

(d) The specific information used to calculate the committed effective dose equivalent pursuant to WAC 246-221-040(3);

(e) Records of the results of surveys to determine the dose from external sources of radiation used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents;

(f) Records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose;

(g) Records showing the results of air sampling, surveys, and bioassays required pursuant to WAC 246-221-117 (1)(b)(i) and (ii);

(h) Records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment.

(8) The licensee or registrant shall retain the following records until the department terminates the pertinent license or registration requiring the record:

(a) Records of waste disposal made under the provisions of WAC 246-221-180, 246-221-190, 246-221-210 and 246-221-220, chapter 246-249 WAC, and any burials in soil as previously authorized;

(b) Records of dose to individual members of the public as required by WAC 246-221-060(4);

(c) Records of the provisions of the radiation protection program as required by WAC 246-221-005.

(9) The licensee or registrant shall retain the following records for three years after the record is made:

(a) Records of testing entry control devices for very high radiation areas as required by WAC 246-221-106(3);

(b) Records used in preparing department Form RHF-4 or RHF-4A;

(c) Records showing the results of general surveys required by WAC 246-221-110 and package surveys required by WAC 246-221-160;

(d) Records of calibrations required by WAC 246-221-110;

(e) Records of program audits and other reviews of the content and implementation of the radiation protection program required by WAC 246-221-005;

(f) Records of waste disposal by decay in storage.

(10) If there is a conflict between the department's regulations in this part, license condition, or other written department approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the department, under WAC 246-220-050, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

(11) The discontinuance or curtailment of activities does not relieve the licensee or registrant of responsibility for retaining all records required by this section.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-230, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-230, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-230, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-170, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-170, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-170, filed 12/8/80; Order 1095, § 402-24-170, filed 2/6/76; Order 708, § 402-24-170, filed 8/24/72; Order 1, § 402-24-170, filed 7/2/71; Order 1, § 402-24-170, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-240 Reports of stolen, lost or missing radiation sources. (1) Each licensee and/or registrant shall report by telephone (206/682-5327) and confirm promptly by letter, telegram, mailgram, or facsimile to the State Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827.

(a) Immediately after its occurrence becomes known to the licensee, stolen, lost, or missing radioactive material in an aggregate quantity equal to or greater than one thousand times the quantity specified in WAC 246-221-300; or

(b) Within thirty days after its occurrence becomes known to the licensee, lost, stolen, or missing radioactive material in an aggregate quantity greater than ten times the quantity specified in Appendix C that is still missing or any item not exempted in chapter 246-232 WAC; or

(c) Immediately after its occurrence becomes known to the registrant, a stolen, lost, or missing radiation machine.

(2) Each licensee or registrant required to make a report pursuant to subsection (1) of this section shall, within thirty days after making the telephone report, make a written report to the department setting forth the following information:

(a) A description of the licensed or registered source of radiation involved, including, for radioactive material, the kind, quantity, and chemical and physical form; and, for radiation machines, the manufacturer, model and serial number, type and maximum energy of radiation emitted; and

(b) A description of the circumstances under which the loss or theft occurred; and

(c) A statement of disposition, or probable disposition, of the licensed or registered source of radiation involved; and

(d) Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas; and

(e) Actions that have been taken, or will be taken, to recover the source of radiation; and

(f) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed or registered sources of radiation.

(3) Subsequent to filing the written report, the licensee or registrant shall also report additional substantive information on the loss or theft within thirty days after the licensee or registrant learns of such information.

(4) The licensee or registrant shall prepare any report filed with the department pursuant to this section so that names of individuals who may have received exposure to radiation are stated in a separate and detachable portion of the report.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-240, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.-

080.91-15-112 (Order 184), § 246-221-240, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-180, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-180, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-180, filed 12/8/80; Order 1095, § 402-24-180, filed 2/6/76; Order 708, § 402-24-180, filed 8/24/72; Order 1, § 402-24-180, filed 7/2/71; Order 1, § 402-24-180, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-250 Notification of incidents. (1)

Immediate notification. Notwithstanding other requirements for notification, each licensee and/or registrant shall immediately (as soon as possible but no later than four hours after discovery of an incident) notify the State Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827, by telephone (206/682-5327) and confirming letter, telegram, mailgram, or facsimile of any incident involving any radiation source which may have caused or threatens to cause:

(a) An individual to receive:

(i) A total effective dose equivalent of 0.25 Sv (25 rem) or more;

(ii) A lens dose equivalent of 0.75 Sv (75 rem) or more;

(iii) A shallow dose equivalent to the skin or extremities or a total organ dose equivalent of 2.5 Sv (250 rem) or more;

(b) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for twenty-four hours, the individual could have received an intake five times the occupational ALI. This provision does not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures; or

(c) The loss of ability to take immediate protective actions necessary to avoid exposure to sources of radiation or releases of radioactive material that could exceed regulatory limits. Events which could cause such a loss of ability include fires, explosions, toxic gas releases, etc.

(2) **Twenty-four hour notification.** Each licensee and/or registrant shall within twenty-four hours of discovery of the event, notify the State Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827, by telephone (206/682-5327) and confirming letter, telegram, mailgram, or facsimile of any incident involving any radiation source possessed which may have caused or threatens to cause:

(a) An individual to receive, in a period of twenty-four hours:

(i) A total effective dose equivalent exceeding 0.05 Sv (5 rem);

(ii) A lens dose equivalent exceeding 0.15 Sv (15 rem);

(iii) A shallow dose equivalent to the skin or extremities or a total organ dose equivalent exceeding 0.5 Sv (50 rem);

(b) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for twenty-four hours, the individual could have received an intake in excess of one occupational ALI. This provision does not apply to locations where personnel are not normally sta-

tioned during routine operations, such as hot-cells or process enclosures;

(c) An unplanned contamination incident that:

(i) Requires access to the contaminated area, by workers or the general public, to be restricted for more than twenty-four hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) Involves a quantity of material greater than five times the lowest annual limit on intake specified in WAC 246-221-290; and

(iii) Has access to the area restricted for a reason other than to allow radionuclides with a half-life of less than twenty-four hours to decay prior to decontamination;

(d) Equipment failure or inability to function as designed when:

(i) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive material exceeding regulatory limits or to mitigate the consequences of an accident;

(ii) The equipment is required to be available and operable at the time it becomes disabled or fails to function; and

(iii) No redundant equipment is available and operable to perform the required safety functions;

(e) An unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body; or

(f) An unplanned fire or explosion damaging any radioactive material or any device, container or equipment containing radioactive material when:

(i) The quantity of radioactive material involved is greater than five times the lowest annual limit on intake specified in WAC 246-221-290; and

(ii) The damage affects the integrity of the radioactive material or its container.

(3) For each occurrence requiring notification pursuant to this section, a prompt investigation of the situation shall be initiated by the licensee/registrant. A written report of the findings of the investigation shall be sent to the department within thirty days.

(4) The licensee or registrant shall prepare each report filed with the department under this section so that names of individuals who have received exposure to sources of radiation are stated in a separate and detachable portion of the report.

Any report filed with the department under this section shall contain the information described in WAC 246-221-260 (2) and (3).

(5) The provisions of this section do not apply to doses that result from planned special exposures, provided such doses are within the limits for planned special exposures and are reported pursuant to WAC 246-221-265.

(6) Telephone notifications that do not involve immediate or twenty-four hour notification should be made to the Olympia office (360 236-3300).

(7) Telephone notification required under this section shall include, to the extent that the information is available at the time of notification:

(a) The caller's name and call-back telephone number;

(b) A description of the incident including date and time;

- (c) The exact location of the incident;
- (d) The radionuclides, quantities, and chemical and physical forms of the radioactive materials involved; and
- (e) Any personnel radiation exposure data available.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-250, filed 2/21/01, effective 3/24/01; 98-13-037, § 246-221-250, filed 6/8/98, effective 7/9/98; 95-01-108, § 246-221-250, filed 12/21/94, effective 1/21/95; 94-01-073, § 246-221-250, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-250, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-190, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-190, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-190, filed 12/8/80; Order 1095, § 402-24-190, filed 2/6/76; Order 708, § 402-24-190, filed 8/24/72; Order 1, § 402-24-190, filed 7/2/71; Order 1, § 402-24-190, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-260 Reports of overexposures and excessive levels and concentrations. (1) In addition to any notification required by WAC 246-221-250, each licensee or registrant shall submit a written report to the department within thirty days after learning of any of the following occurrences:

(a) Incidents for which notification is required by WAC 246-221-250; or

(b) Doses in excess of any of the following:

(i) The occupational dose limits for adults in WAC 246-221-010; or

(ii) The occupational dose limits for a minor in WAC 246-221-050; or

(iii) The limits for an embryo/fetus of a declared pregnant woman in WAC 246-221-055; or

(iv) The limits for an individual member of the public in WAC 246-221-060; or

(v) Any applicable limit in the license; or

(vi) The ALARA constraints for air emissions established under WAC 246-221-005; or

(c) Levels of radiation or concentrations of radioactive material in:

(i) A restricted area in excess of applicable limits in the license; or

(ii) An unrestricted area in excess of ten times the applicable limit set forth in this chapter or in the license or registration, whether or not involving exposure of any individual in excess of the limits in WAC 246-221-060; or

(d) For source materials milling licensees and nuclear power plants subject to the provisions of United States Environmental Protection Agency's generally applicable environmental radiation standards in 40 CFR 190, levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards.

(2) Each report required by subsection (1) of this section shall describe:

(a) The incident and its exact location, time and date;

(b) The extent of exposure of individuals to radiation or to radioactive material, including estimates of each individual's dose as required by subsection (3) of this section;

(c) Levels of radiation and concentrations of radioactive material involved, including the radionuclides, quantities, and chemical and physical form;

(d) The cause or probable cause of the exposure, levels of radiation or concentrations;

(e) The manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(f) The results of any evaluations or assessments; and

(g) Corrective steps taken or planned to assure against a recurrence, including the schedule for achieving conformance with applicable limits, ALARA constraints, generally applicable environmental standards, and associated license conditions.

(3) Each report filed with the department pursuant to this section shall include for each individual exposed the name, social security number, and date of birth, and an estimate of the individual's dose. With respect to the limit for the embryo/fetus in WAC 246-221-055, the identifiers should be those of the declared pregnant woman. The report shall be prepared so that this information is stated in a separate and detachable part of the report.

(4) Individuals shall be notified of reports in accordance with the requirements of WAC 246-222-040.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-221-260, filed 7/21/99, effective 8/21/99; 95-01-108, § 246-221-260, filed 12/21/94, effective 1/21/95; 94-01-073, § 246-221-260, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-260, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-260, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-200, filed 12/8/80; Order 1095, § 402-24-200, filed 2/6/76; Order 708, § 402-24-200, filed 8/24/72; Order 1, § 402-24-200, filed 7/2/71; Order 1, § 402-24-200, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-265 Special reports to the department—Planned special exposures and leaking sources. (1) The licensee or registrant shall submit a written report to the department within thirty days following any planned special exposure conducted in accordance with WAC 246-221-030. The written report shall:

(a) Inform the department that a planned special exposure was conducted;

(b) Indicate the date the planned special exposure occurred; and

(c) Provide the information required by WAC 246-221-030.

(2) The licensee shall file a written report with the department within five days after learning that a sealed source is leaking or contaminated. The report shall describe:

(a) The source;

(b) The source holder;

(c) The equipment in which the source is installed;

(d) The test results; and

(e) The corrective action taken.

[Statutory Authority: RCW 70.98.050. 99-05-013, § 246-221-265, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-221-265, filed 12/9/93, effective 1/9/94.]

WAC 246-221-270 Vacating premises and release of equipment. (1) Each specific licensee shall notify the department in writing of intent to vacate, at least 30 days before vacating or relinquishing possession or control of premises which may have been contaminated with radioactive material as a result of licensed activities.

(2) Each licensee shall permanently decontaminate the premise, before vacating any premise or transferring the premise, in accordance with the standards specified in chapter 246-246 WAC. A survey by the licensee shall be made after the decontamination and the department and the landlord or subsequent tenant or transferee shall be provided with a copy of the survey no later than the date of vacating or relinquishing possession or control of the premise.

(3) No machinery, instruments, laboratory equipment or any other property used in contact with, or close proximity to radioactive material at a licensed premise shall be assigned, sold, leased, or transferred to an unlicensed person unless the property has been decontaminated and meets the standards specified in WAC 246-232-140. A survey shall be made after the decontamination and the department and subsequent owner or transferee shall be provided with a copy of the survey report.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-221-270, filed 3/15/00, effective 4/15/00; 94-01-073, § 246-221-270, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-270, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-210, filed 2/6/76; Order 1, § 402-24-210, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-275 Notification of changes in a facility. Each licensee or registrant shall notify the department of changes in any room or area in a facility where a source of radiation is used. Changes of interest to the department

include, but are not limited to, new or replacement equipment containing or emitting radiation, increased occupancy, repair or replacement of existing shielding, new shielding, alteration of the ventilation system, and changes in procedures done in the room or area.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-275, filed 12/9/93, effective 1/9/94.]

WAC 246-221-280 Notifications and reports to individuals. (1) Requirements for notification and reports to individuals of exposure to radiation or radioactive material are specified in WAC 246-222-040.

(2) When a licensee or registrant is required pursuant to WAC 246-221-260 to report to the department any exposure of an identified occupationally exposed individual, or an identified member of the public, or dosimetry device assigned to any individual to radiation from any source, the licensee or registrant shall also notify the individual. Such notice shall be transmitted at a time not later than the transmittal to the department, and shall comply with the provisions of WAC 246-222-040(1).

[Statutory Authority: RCW 70.98.050. 99-05-012, § 246-221-280, filed 2/5/99, effective 3/8/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-280, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-280, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-215, filed 12/11/86; Order 1095, § 402-24-215, filed 2/6/76.]

WAC 246-221-285 Assigned protection factors for respirators. ^a

	Operating mode	Assigned Protection Factors
I. Air-Purifying Respirators (Particulate ^b only) ^c:		
Filtering facepiece disposable ^d	Negative Pressure.	(^d)
Facepiece, half ^e	Negative Pressure.	10
Facepiece, full.	Negative Pressure.	100
Facepiece, half.	Powered air-purifying respirators	50
Facepiece, full.	Powered air-purifying respirators	1000
Helmet/hood.	Powered air-purifying respirators	1000
Facepiece, loose-fitting.	Powered air-purifying respirators	25
II. Atmosphere-Supplying Respirators (Particulate, gases and vapors ^f):		
1. Air-line respirator:		
Facepiece, half.	Demand.	10
Facepiece, half.	Continuous Flow.	50
Facepiece, half.	Pressure Demand.	50
Facepiece, full.	Demand.	100
Facepiece, full.	Continuous Flow.	1000
Facepiece, full.	Pressure Demand.	1000
Helmet/hood.	Continuous Flow.	1000
Facepiece, loose-fitting.	Continuous Flow.	25
Suit.	Continuous Flow.	(^g)
2. Self-contained breathing apparatus (SCBA):		
Facepiece, full.	Demand.	^h 100
Facepiece, full.	Pressure Demand.	ⁱ 10,000
Facepiece, full.	Demand, Recirculating.	^h 100
Facepiece, full.	Positive Pressure Recirculating.	ⁱ 10,000
III. Combination Respirators:		
Any combination of air-purifying and atmosphere-supplying respirators.	Assigned protection factor for type and mode of operation as listed above.	

- ^a These assigned protection factors apply only in a respiratory protection program that meets the requirements of this chapter. They are applicable only to airborne radiological hazards and may not be appropriate to circumstances when chemical or other respiratory hazards exist instead of, or in addition to, radioactive hazards. Selection and use of respirators for these circumstances must also comply with Department of Labor regulations. Radioactive contaminants for which the concentration values in Table I, Column 3 of WAC 246-221-290, Appendix A, are based on internal dose due to inhalation may, in addition, present external exposure hazards at higher concentrations. Under these circumstances, limitations on occupancy may have to be governed by external dose limits.
- ^b Air-purifying respirators with APF <100 must be equipped with particulate filters that are at least 95 percent efficient. Air-purifying respirators with APF = 100 must be equipped with particulate filters that are at least 99 percent efficient. Air-purifying respirators with APFs >100 must be equipped with particulate filters that are at least 99.97 percent efficient.
- ^c The licensee may apply to the department for the use of an APF greater than 1 for sorbent cartridges as protection against airborne radioactive gases and vapors (e.g., radiiodine).
- ^d Licensees may permit individuals to use this type of respirator who have not been medically screened or fit tested on the device provided that no credit be taken for their use in estimating intake or dose. It is also recognized that it is difficult to perform an effective positive or negative pressure preuse user seal check on this type of device. All other respiratory protection program requirements listed in WAC 246-221-117 apply. An assigned protection factor has not been assigned for these devices. However, an APF equal to 10 may be used if the licensee can demonstrate a fit factor of at least 100 by use of a validated or evaluated, qualitative or quantitative fit test.
- ^e Under-chin type only. No distinction is made in this section between elastomeric half-masks with replaceable cartridges and those designed with the filter medium as an integral part of the facepiece (e.g., disposable or reusable disposable). Both types are acceptable so long as the seal area of the latter contains some substantial type of seal-enhancing material such as rubber or plastic, the two or more suspension straps are adjustable, the filter medium is at least 95 percent efficient and all other requirements of this part are met.
- ^f The assigned protection factors for gases and vapors are not applicable to radioactive contaminants that present an absorption or submersion hazard. For tritium oxide vapor, approximately one-third of the intake occurs by absorption through the skin so that an overall protection factor of 3 is appropriate when atmosphere-supplying respirators are used to protect against tritium oxide. Exposure to radioactive noble gases is not considered a significant respiratory hazard, and protective actions for these contaminants should be based on external (submersion) dose considerations.
- ^g No NIOSH approval schedule is currently available for atmosphere-supplying suits. This equipment may be used in an acceptable respiratory protection program as long as all the other minimum program requirements, with the exception of fit testing, are met (i.e., WAC 246-221-117).
- ^h The licensee should implement institutional controls to assure that these devices are not used in areas immediately dangerous to life or health (IDLH).
- ⁱ This type of respirator may be used as an emergency device in unknown concentrations for protection against inhalation hazards. External radiation hazards and other limitations to permitted exposure such as skin absorption shall be taken into account in these circumstances. This device may not be used by any individual who experiences perceptible outward leakage of breathing gas while wearing the device.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-285, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-285, filed 12/9/93, effective 1/9/94.]

WAC 246-221-290 Appendix A—Annual limits on intake (ALI) and derived air concentrations (DAC) of radionuclides for occupational exposure; effluent concentrations; concentrations for release to sanitary sewerage. For each radionuclide, Table I indicates the chemical form which is to be used for selecting the appropriate ALI or DAC

[Title 246 WAC—p. 226]

value. The ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter (AMAD) of 1 µm (micron) and for three classes (D,W,Y) of radioactive material, which refer to their retention (approximately days, weeks or years) in the pulmonary region of the lung. This classification applies to a range of clearance half-times for D if less than ten days, for W from ten to one hundred days, and for Y greater than one hundred days. Table II provides concentration limits for airborne and liquid effluents released to the general environment. Table III provides concentration limits for discharges to sanitary sewerage.

Note: The values in Tables I, II, and III are presented in the computer "E" notation. In this notation a value of 6E-02 represents a value of 6×10^{-2} or 0.06, 6E+2 represents 6×10^2 or 600, and 6E+0 represents 6×10^0 or 6.

Table I "Occupational Values"

Note that the columns in Table I of this appendix captioned "Oral Ingestion ALI," "Inhalation ALI," and "DAC," are applicable to occupational exposure to radioactive material.

The ALIs in this appendix are the annual intakes of given radionuclide by "Reference Man" which would result in either: A committed effective dose equivalent of 0.05 Sv (5 rem), stochastic ALI; or a committed dose equivalent of 0.5 Sv (50 rem) to an organ or tissue, nonstochastic ALI. The stochastic ALIs were derived to result in a risk, due to irradiation of organs and tissues, comparable to the risk associated with deep dose equivalent to the whole body of 0.05 Sv (5 rem). The derivation includes multiplying the committed dose equivalent to an organ or tissue by a weighting factor, w_T . This weighting factor is the proportion of the risk of stochastic effects resulting from irradiation of the organ or tissue, T , to the total risk of stochastic effects when the whole body is irradiated uniformly. The values of w_T are listed under the definition of weighting factor in WAC 246-221-005. The nonstochastic ALIs were derived to avoid nonstochastic effects, such as prompt damage to tissue or reduction in organ function.

A value of $w_T = 0.06$ is applicable to each of the five organs or tissues in the "remainder" category receiving the highest dose equivalents, and the dose equivalents of all other remaining tissues may be disregarded. The following portions of the GI tract — stomach, small intestine, upper large intestine, and lower large intestine — are to be treated as four separate organs.

Note that the dose equivalents for an extremity, elbows, arms below the elbows, feet and lower legs, knees, and legs below the knees, skin, and lens of the eye are not considered in computing the committed effective dose equivalent, but are subject to limits that must be met separately.

When an ALI is defined by the stochastic dose limit, this value alone is given. When an ALI is determined by the nonstochastic dose limit to an organ, the organ or tissue to which the limit applies is shown, and the ALI for the stochastic limit is shown in parentheses. Abbreviated organ or tissue designations are used:

(2003 Ed.)

LLI wall	=	lower large intestine wall;
St. wall	=	stomach wall;
Blad wall	=	bladder wall; and
Bone surf	=	bone surface.

The use of the ALIs listed first, the more limiting of the stochastic and nonstochastic ALIs, will ensure that nonstochastic effects are avoided and that the risk of stochastic effects is limited to an acceptably low value. If, in a particular situation involving a radionuclide for which the nonstochastic ALI is limiting, use of that nonstochastic ALI is considered unduly conservative, the licensee may use the stochastic ALI to determine the committed effective dose equivalent. However, the licensee shall also ensure that the 0.5 Sv (50 rem) dose equivalent limit for any organ or tissue is not exceeded by the sum of the external deep dose equivalent plus the internal committed dose equivalent to that organ, not the effective dose. For the case where there is no external dose contribution, this would be demonstrated if the sum of the fractions of the nonstochastic ALIs (ALI_{ns}) that contribute to the committed dose equivalent to the organ receiving the highest dose does not exceed unity, that is, \sum (intake (in μCi) of each radionuclide/ ALI_{ns}) ≤ 1.0 . If there is an external deep dose equivalent contribution of H_d , then this sum must be less than $1 - (H_d/50)$, instead of ≤ 1.0 .

The derived air concentration (DAC) values are derived limits intended to control chronic occupational exposures. The relationship between the DAC and the ALI is given by:

$$\text{DAC} = \text{ALI (in } \mu\text{Ci)} / (2000 \text{ hours per working year} \times 60 \text{ minutes/hour} \times 2 \times 10^4 \text{ ml per minute}) = [\text{ALI}/2.4 \times 10^9] \mu\text{Ci/ml},$$

where 2×10^4 ml per minute is the volume of air breathed per minute at work by Reference Man under working conditions of light work.

The DAC values relate to one of two modes of exposure: Either external submersion or the internal committed dose equivalents resulting from inhalation of radioactive materials. DACs based upon submersion are for immersion in a semi-infinite cloud of uniform concentration and apply to each radionuclide separately.

The ALI and DAC values include contributions to exposure by the single radionuclide named and any in-growth of daughter radionuclides produced in the body by decay of the parent. However, intakes that include both the parent and daughter radionuclides should be treated by the general method appropriate for mixtures.

The values of ALI and DAC do not apply directly when the individual both ingests and inhales a radionuclide, when the individual is exposed to a mixture of radionuclides by either inhalation or ingestion or both, or when the individual is exposed to both internal and external irradiation. See WAC 246-221-015. When an individual is exposed to radioactive materials which fall under several of the translocation classifications of the same radionuclide, such as, Class D, Class W, or Class Y, the exposure may be evaluated as if it were a mixture of different radionuclides.

It should be noted that the classification of a compound as Class D, W, or Y is based on the chemical form of the compound and does not take into account the radiological half-life of different radionuclides. For this reason, values are given for Class D, W, and Y compounds, even for very short-lived radionuclides.

Table II "Effluent Concentrations"

The columns in Table II of this appendix captioned "Effluents," "Air" and "Water" are applicable to the assessment and control of dose to the public, particularly in the implementation of the provisions of WAC 246-221-070. The concentration values given in Columns 1 and 2 of Table II are equivalent to the radionuclide concentrations which, if inhaled or ingested continuously over the course of a year, would produce a total effective dose equivalent of 0.50 mSv (0.05 rem).

Consideration of nonstochastic limits has not been included in deriving the air and water effluent concentration limits because nonstochastic effects are presumed not to occur at or below the dose levels established for individual members of the public. For radionuclides, where the nonstochastic limit was governing in deriving the occupational DAC, the stochastic ALI was used in deriving the corresponding airborne effluent limit in Table II. For this reason, the DAC and airborne effluent limits are not always proportional as was the case in the previous Appendix A of this chapter.

The air concentration values listed in Table II, Column 1 were derived by one of two methods. For those radionuclides for which the stochastic limit is governing, the occupational stochastic inhalation ALI was divided by 2.4×10^9 , relating the inhalation ALI to the DAC, as explained above, and then divided by a factor of three hundred. The factor of three hundred includes the following components: A factor of fifty to relate the 0.05 Sv (5 rem) annual occupational dose limit to the 1 mSv (0.1 rem) limit for members of the public, a factor of three to adjust for the difference in exposure time and the inhalation rate for a worker and that for members of the public; and a factor of two to adjust the occupational values, derived for adults, so that they are applicable to other age groups.

For those radionuclides for which submersion, that is external dose, is limiting, the occupational DAC in Table I, Column 3 was divided by two hundred nineteen. The factor of two hundred nineteen is composed of a factor of fifty, as described above, and a factor of 4.38 relating occupational exposure for two thousand hours per year to full-time exposure (eight thousand seven hundred sixty hours per year). Note that an additional factor of two for age considerations is not warranted in the submersion case.

The water concentrations were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^7 . The factor of 7.3×10^7 (ml) includes the following components: The factors of fifty and two described above and a factor of 7.3×10^5 (ml) which is the annual water intake of Reference Man.

Note 2 of this appendix provides groupings of radionuclides which are applicable to unknown mixtures of radionuclides. These groupings, including occupational inhalation ALIs and DACs, air and water effluent concentrations and releases to sewer, require demonstrating that the most limiting radionuclides in successive classes are absent. The limit for the unknown mixture is defined when the presence of one of the listed radionuclides cannot be definitely excluded as being present either from knowledge of the radionuclide composition of the source or from actual measurements.

Table III "Releases to Sewers"

The monthly average concentrations for release to sanitary sewerage are applicable to the provisions in WAC 246-221-190. The concentration values were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^6 (ml). The factor of 7.3×10^6 (ml) is composed of a factor of 7.3×10^5 (ml), the annual water intake by Reference Man, and a factor of ten, such that the concentrations, if the sewage released by the licensee were the only source of water ingested by a Reference Man during a year, would result in a committed effective dose equivalent of 5 mSv (0.5 rem).

LIST OF ELEMENTS

Name	Symbol	Atomic Number	Name	Symbol	Atomic Number
Actinium	Ac	89	Mercury	Hg	80
Aluminum	Al	13	Molybdenum	Mo	42
Americium	Am	95	Neodymium	Nd	60
Antimony	Sb	51	Neptunium	Np	93
Argon	Ar	18	Nickel	Ni	28
Arsenic	As	33	Niobium	Nb	41
Astatine	At	85	Osmium	Os	76
Barium	Ba	56	Palladium	Pd	46
Berkelium	Bk	97	Phosphorus	P	15

LIST OF ELEMENTS

Name	Symbol	Atomic Number	Name	Symbol	Atomic Number
Beryllium	Be	4	Platinum	Pt	78
Bismuth	Bi	83	Plutonium	Pu	94
Bromine	Br	35	Polonium	Po	84
Cadmium	Cd	48	Potassium	K	19
Calcium	Ca	20	Praseodymium	Pr	59
Californium	Cf	98	Promethium	Pm	61
Carbon	C	6	Protactinium	Pa	91
Cerium	Ce	58	Radium	Ra	88
Cesium	Cs	55	Radon	Rn	86
Chlorine	Cl	17	Rhenium	Re	75
Chromium	Cr	24	Rhodium	Rh	45
Cobalt	Co	27	Rubidium	Rb	37
Copper	Cu	29	Ruthenium	Ru	44
Curium	Cm	96	Samarium	Sm	62
Dysprosium	Dy	66	Scandium	Sc	21
Einsteinium	Es	99	Selenium	Se	34
Erbium	Er	68	Silicon	Si	14
Europium	Eu	63	Silver	Ag	47
Fermium	Fm	100	Sodium	Na	11
Fluorine	F	9	Strontium	Sr	38
Francium	Fr	87	Sulfur	S	16
Gadolinium	Gd	64	Tantalum	Ta	73
Gallium	Ga	31	Technetium	Tc	43
Germanium	Ge	32	Tellurium	Te	52
Gold	Au	79	Terbium	Tb	65
Hafnium	Hf	72	Thallium	Tl	81
Holmium	Ho	67	Thorium	Th	90
Hydrogen	H	1	Thulium	Tm	69
Indium	In	49	Tin	Sn	50
Iodine	I	53	Titanium	Ti	22
Iridium	Ir	77	Tungsten	W	74
Iron	Fe	26	Uranium	U	92
Krypton	Kr	36	Vanadium	V	23
Lanthanum	La	57	Xenon	Xe	54
Lead	Pb	82	Ytterbium	Yb	70
Lutetium	Lu	71	Yttrium	Y	39
Magnesium	Mg	12	Zinc	Zn	30
Manganese	Mn	25	Zirconium	Zr	40
Mendelevium	Md	101			

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			Oral Ingestion	Inhalation		Air	Water	
			ALI μCi	ALI μCi	DAC μCi/ml	μCi/ml	μCi/ml	μCi/ml
1	Hydrogen-3	Water, DAC includes skin absorption	8E+4	8E+4	2E-5	1E-7	1E-3	1E-2
Gas (HT or T ₂) Submersion ¹ : Use above values as HT and T ₂ oxidize in air and in the body to HTO.								
4	Beryllium-7	W, all compounds except those given for Y Y, oxides, halides, and nitrates	4E+4	2E+4 2E+4	9E-6 8E-6	3E-8 3E-8	6E-4 -	6E-3 -
4	Beryllium-10	W, see ⁷ Be Y, see ⁷ Be	1E+3 LLI wall (1E+3)	2E+2 -	6E-8 -	2E-10 -	- 2E-5	- 2E-4
6	Carbon-11 ²	Monoxide Dioxide Compounds	- - 4E+5	1E+6 6E+5 4E+5	5E-4 3E-4 2E-4	2E-6 9E-7 6E-7	- - 6E-3	- - 6E-2

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
6	Carbon-14	Monoxide	-	2E+6	7E-4	2E-6	-	-
		Dioxide	-	2E+5	9E-5	3E-7	-	-
		Compounds	2E+3	2E+3	1E-6	3E-9	3E-5	3E-4
9	Fluorine-18 ²	D, fluorides of H, Li, Na, K, Rb, Cs, and Fr	5E+4 St wall (5E+4)	7E+4	3E-5	1E-7	-	-
		W, fluorides of Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Mn, Tc, and Re Y, lanthanum fluoride	-	-	-	-	7E-4	7E-3
			-	9E+4	4E-5	1E-7	-	-
			-	8E+4	3E-5	1E-7	-	-
11	Sodium-22	D, all compounds	4E+2	6E+2	3E-7	9E-10	6E-6	6E-5
11	Sodium-24	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
12	Magnesium-28	D, all compounds except those given for W	7E+2	2E+3	7E-7	2E-9	9E-6	9E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	1E+3	5E-7	2E-9	-	-
13	Aluminum-26	D, all compounds except those given for W	4E+2	6E+1	3E-8	9E-11	6E-6	6E-5
14	Silicon-31	W, oxides, hydroxides, carbides, halides, and nitrates	-	9E+1	4E-8	1E-10	-	-
		D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and nitrates Y, aluminosilicate glass	-	3E+4	1E-5	5E-8	-	-
14	Silicon-32	D, see ³¹ Si	2E+3 LLI wall (3E+3)	2E+2	1E-7	3E-10	-	-
		W, see ³¹ Si	-	1E+2	5E-8	2E-10	4E-5	4E-4
		Y, see ³¹ Si	-	5E+0	2E-9	7E-12	-	-
15	Phosphorus-32	D, all compounds except phosphates given for W	6E+2	9E+2	4E-7	1E-9	9E-6	9E-5
		W, phosphates of Zn ²⁺ , S ³⁺ , Mg ²⁺ , Fe ³⁺ , Bi ³⁺ , and lanthanides	-	4E+2	2E-7	5E-10	-	-
15	Phosphorus-33	D, see ³² P	6E+3	8E+3	4E-6	1E-8	8E-5	8E-4
		W, see ³² P	-	3E+3	1E-6	4E-9	-	-
16	Sulfur-35	Vapor	-	1E+4	6E-6	2E-8	-	-
		D, sulfides and sulfates except those given for W	1E+4 LLI wall (8E+3)	2E+4	7E-6	2E-8	-	-
		W, elemental sulfur, sulfides of Sr, Ba, Ge, Sn, Pb, As, Sb, Bi, Cu, Ag, Au, Zn, Cd, Hg, W, and Mo. Sulfates of Ca, Sr, Ba, Ra, As, Sb, and Bi	6E+3	-	-	-	1E-4	1E-3
			-	2E+3	9E-7	3E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers		
			Col. 1 Oral Ingestion ALI μCi	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml		
									Inhalation	
									ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml
17	Chlorine-36	D, chlorides of H, Li, Na, K, Rb, Cs, and Fr W, chlorides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, and Re	2E+3	2E+3	1E-6	3E-9	2E-5	2E-4		
17	Chlorine-38 ²	D, see ³⁶ Cl	2E+4 St wall (3E+4)	4E+4	2E-5	6E-8	-	-		
		W, see ³⁶ Cl	-	5E+4	2E-5	6E-8	3E-4	3E-3		
17	Chlorine-39 ²	D, see ³⁶ Cl	2E+4 St wall (4E+4)	5E+4	2E-5	7E-8	-	-		
		W, see ³⁶ Cl	-	6E+4	2E-5	8E-8	5E-4	5E-3		
18	Argon-37	Submersion ¹	-	-	1E+0	6E-3	-	-		
18	Argon-39	Submersion ¹	-	-	2E-4	8E-7	-	-		
18	Argon-41	Submersion ¹	-	-	3E-6	1E-8	-	-		
19	Potassium-40	D, all compounds	3E+2	4E+2	2E-7	6E-10	4E-6	4E-5		
19	Potassium-42	D, all compounds	5E+3	5E+3	2E-6	7E-9	6E-5	6E-4		
19	Potassium-43	D, all compounds	6E+3	9E+3	4E-6	1E-8	9E-5	9E-4		
19	Potassium-44 ²	D, all compounds	2E+4 St wall (4E+4)	7E+4	3E-5	9E-8	-	-		
			-	-	-	-	5E-4	5E-3		
19	Potassium-45 ²	D, all compounds	3E+4 St wall (5E+4)	1E+5	5E-5	2E-7	-	-		
			-	-	-	-	7E-4	7E-3		
20	Calcium-41	W, all compounds	3E+3 Bone surf (4E+3)	4E+3 Bone surf (4E+3)	2E-6	-	-	-		
			-	-	-	5E-9	6E-5	6E-4		
20	Calcium-45	W, all compounds	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4		
20	Calcium-47	W, all compounds	8E+2	9E+2	4E-7	1E-9	1E-5	1E-4		
21	Scandium-43	Y, all compounds	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3		
21	Scandium-44m	Y, all compounds	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5		
21	Scandium-44	Y, all compounds	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4		
21	Scandium-46	Y, all compounds	9E+2	2E+2	1E-7	3E-10	1E-5	1E-4		
21	Scandium-47	Y, all compounds	2E+3 LLI wall (3E+3)	3E+3	1E-6	4E-9	-	-		
			-	-	-	-	4E-5	4E-4		
21	Scandium-48	Y, all compounds	8E+2	1E+3	6E-7	2E-9	1E-5	1E-4		

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
21	Scandium-49 ²	Y, all compounds	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
22	Titanium-44	D, all compounds except those given for W and Y	3E+2	1E+1	5E-9	2E-11	4E-6	4E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	3E+1	1E-8	4E-11	-	-
		Y, SrTiO	-	6E+0	2E-9	8E-12	-	-
22	Titanium-45	D, see ⁴⁴ Ti	9E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see ⁴⁴ Ti	-	4E+4	1E-5	5E-8	-	-
		Y, see ⁴⁴ Ti	-	3E+4	1E-5	4E-8	-	-
23	Vanadium-47 ²	D, all compounds except those given for W	3E+4	8E+4	3E-5	1E-7	-	-
		St wall (3E+4)	-	-	-	-	4E-4	4E-3
		W, oxides, hydroxides, carbides, and halides	-	1E+5	4E-5	1E-7	-	-
23	Vanadium-48	D, see ⁴⁷ V	6E+2	1E+3	5E-7	2E-9	9E-6	9E-5
		W, see ⁴⁷ V	-	6E+2	3E-7	9E-10	-	-
23	Vanadium-49	D, see ⁴⁷ V	7E+4	3E+4	1E-5	-	-	-
		LLI wall (9E+4)	-	Bone surf (3E+4)	-	5E-8	1E-3	1E-2
		W, see ⁴⁷ V	-	2E+4	8E-6	2E-8	-	-
24	Chromium-48	D, all compounds except those given for W and Y	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, halides and nitrates	-	7E+3	3E-6	1E-8	-	-
		Y, oxides and hydroxides	-	7E+3	3E-6	1E-8	-	-
24	Chromium-49 ²	D, see ⁴⁸ Cr	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, see ⁴⁸ Cr	-	1E+5	4E-5	1E-7	-	-
		Y, see ⁴⁸ Cr	-	9E+4	4E-5	1E-7	-	-
24	Chromium-51	D, see ⁴⁸ Cr	4E+4	5E+4	2E-5	6E-8	5E-4	5E-3
		W, see ⁴⁸ Cr	-	2E+4	1E-5	3E-8	-	-
		Y, see ⁴⁸ Cr	-	2E+4	8E-6	3E-8	-	-
25	Manganese-51 ²	D, all compounds except those given for W	2E+4	5E+4	2E-5	7E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	8E-8	-	-
25	Manganese-52m ²	D, see ⁵¹ Mn	3E+4	9E+4	4E-5	1E-7	-	-
		St wall (4E+4)	-	-	-	-	5E-4	5E-3
		W, see ⁵¹ Mn	-	1E+5	4E-5	1E-7	-	-
25	Manganese-52	D, see ⁵¹ Mn	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
		W, see ⁵¹ Mn	-	9E+2	4E-7	1E-9	-	-
25	Manganese-53	D, see ⁵¹ Mn	5E+4	1E+4	5E-6	-	7E-4	7E-3
		Bone surf (2E+4)	-	-	-	3E-8	-	-
		W, see ⁵¹ Mn	-	1E+4	5E-6	2E-8	-	-
25	Manganese-54	D, see ⁵¹ Mn	2E+3	9E+2	4E-7	1E-9	3E-5	3E-4
		W, see ⁵¹ Mn	-	8E+2	3E-7	1E-9	-	-
25	Manganese-56	D, see ⁵¹ Mn	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁵¹ Mn	-	2E+4	9E-6	3E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
26	Iron-52	D, all compounds except those given for W	9E+2	3E+3	1E-6	4E-9	1E-5	1E-4
		W, oxides, hydroxides, and halides	-	2E+3	1E-6	3E-9	-	-
26	Iron-55	D, see ^{52}Fe	9E+3	2E+3	8E-7	3E-9	1E-4	1E-3
		W, see ^{52}Fe	-	4E+3	2E-6	6E-9	-	-
26	Iron-59	D, see ^{52}Fe	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		W, see ^{52}Fe	-	5E+2	2E-7	7E-10	-	-
26	Iron-60	D, see ^{52}Fe	3E+1	6E+0	3E-9	9E-12	4E-7	4E-6
		W, see ^{52}Fe	-	2E+1	8E-9	3E-11	-	-
27	Cobalt-55	W, all compounds except those given for Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
27	Cobalt-56	W, see ^{55}Co	5E+2	3E+2	1E-7	4E-10	6E-6	6E-5
27	Cobalt-57	Y, see ^{55}Co	4E+2	2E+2	8E-8	3E-10	-	-
		W, see ^{55}Co	8E+3	3E+3	1E-6	4E-9	6E-5	6E-4
27	Cobalt-58m	Y, see ^{55}Co	4E+3	7E+2	3E-7	9E-10	-	-
		W, see ^{55}Co	6E+4	9E+4	4E-5	1E-7	8E-4	8E-3
27	Cobalt-58	Y, see ^{55}Co	-	6E+4	3E-5	9E-8	-	-
		W, see ^{55}Co	2E+3	1E+3	5E-7	2E-9	2E-5	2E-4
27	Cobalt-60m ²	Y, see ^{55}Co	1E+3	7E+2	3E-7	1E-9	-	-
		W, see ^{55}Co	1E+6	4E+6	2E-3	6E-6	-	-
27	Cobalt-60	St wall (1E+6)	-	-	-	-	2E-2	2E-1
		Y, see ^{55}Co	-	3E+6	1E-3	4E-6	-	-
27	Cobalt-61 ²	W, see ^{55}Co	5E+2	2E+2	7E-8	2E-10	3E-6	3E-5
		Y, see ^{55}Co	2E+2	3E+1	1E-8	5E-11	-	-
27	Cobalt-62m ²	W, see ^{55}Co	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		Y, see ^{55}Co	2E+4	6E+4	2E-5	8E-8	-	-
27	Cobalt-62m ²	W, see ^{55}Co	4E+4	2E+5	7E-5	2E-7	-	-
		Y, see ^{55}Co	St wall (5E+4)	-	-	-	7E-4	7E-3
28	Nickel-56	Y, see ^{55}Co	-	2E+5	6E-5	2E-7	-	-
		D, all compounds except those given for W	1E+3	2E+3	8E-7	3E-9	2E-5	2E-4
28	Nickel-57	W, oxides, hydroxides, and carbides	-	1E+3	5E-7	2E-9	-	-
		Vapor	-	1E+3	5E-7	2E-9	-	-
28	Nickel-59	D, see ^{56}Ni	2E+3	5E+3	2E-6	7E-9	2E-5	2E-4
		W, see ^{56}Ni	-	3E+3	1E-6	4E-9	-	-
28	Nickel-63	Vapor	-	6E+3	3E-6	9E-9	-	-
		D, see ^{56}Ni	2E+4	4E+3	2E-6	5E-9	3E-4	3E-3
28	Nickel-63	W, see ^{56}Ni	-	7E+3	3E-6	1E-8	-	-
		Vapor	-	2E+3	8E-7	3E-9	-	-
28	Nickel-63	D, see ^{56}Ni	9E+3	2E+3	7E-7	2E-9	1E-4	1E-3
		W, see ^{56}Ni	-	3E+3	1E-6	4E-9	-	-
		Vapor	-	8E+2	3E-7	1E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
28	Nickel-65	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	8E+3 - -	2E+4 3E+4 2E+4	1E-5 1E-5 7E-6	3E-8 4E-8 2E-8	1E-4 - -	1E-3 - -
28	Nickel-66	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	4E+2 LLI wall (5E+2) - -	2E+3 - 6E+2 3E+3	7E-7 - 3E-7 1E-6	2E-9 - 9E-10 4E-9	- 6E-6 -	- 6E-5 -
29	Copper-60 ²	D, all compounds except those given for W and Y W, sulfides, halides, and nitrates Y, oxides and hydroxides	3E+4 St wall (3E+4) - -	9E+4 - 1E+5 1E+5	4E-5 - 5E-5 4E-5	1E-7 - 2E-7 1E-7	- 4E-4 - -	- 4E-3 - -
29	Copper-61	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 4E+4 4E+4	1E-5 2E-5 1E-5	4E-8 6E-8 5E-8	2E-4 - -	2E-3 - -
29	Copper-64	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 2E+4 2E+4	1E-5 1E-5 9E-6	4E-8 3E-8 3E-8	2E-4 - -	2E-3 - -
29	Copper-67	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	5E+3 - -	8E+3 5E+3 5E+3	3E-6 2E-6 2E-6	1E-8 7E-9 6E-9	6E-5 - -	6E-4 - -
30	Zinc-62	Y, all compounds	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
30	Zinc-63 ²	Y, all compounds	2E+4 St wall (3E+4)	7E+4 - -	3E-5 - -	9E-8 - -	- 3E-4	- 3E-3
30	Zinc-65	Y, all compounds	4E+2	3E+2	1E-7	4E-10	5E-6	5E-5
30	Zinc-69m	Y, all compounds	4E+3	7E+3	3E-6	1E-8	6E-5	6E-4
30	Zinc-69 ²	Y, all compounds	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
30	Zinc-71m	Y, all compounds	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
30	Zinc-72	Y, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
31	Gallium-65 ²	D, all compounds except those given for W W, oxides, hydroxides, carbides, halides, and nitrates	5E+4 St wall (6E+4) -	2E+5 - 2E+5	7E-5 - 8E-5	2E-7 - 3E-7	- 9E-4 -	- 9E-3 -
31	Gallium-66	D, see ⁶⁵ Ga W, see ⁶⁵ Ga	1E+3 -	4E+3 3E+3	1E-6 1E-6	5E-9 4E-9	1E-5 -	1E-4 -
31	Gallium-67	D, see ⁶⁵ Ga W, see ⁶⁵ Ga	7E+3 -	1E+4 1E+4	6E-6 4E-6	2E-8 1E-8	1E-4 -	1E-3 -
31	Gallium-68 ²	D, see ⁶⁵ Ga W, see ⁶⁵ Ga	2E+4 -	4E+4 5E+4	2E-5 2E-5	6E-8 7E-8	2E-4 -	2E-3 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
				Inhalation				
31	Gallium-70 ²	D, see ⁶⁵ Ga	5E+4	2E+5	7E-5	2E-7	-	-
		W, see ⁶⁵ Ga	St wall (7E+4)	-	-	-	1E-3	1E-2
			-	2E+5	8E-5	3E-7	-	-
31	Gallium-72	D, see ⁶⁵ Ga	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ⁶⁵ Ga	-	3E+3	1E-6	4E-9	-	-
31	Gallium-73	D, see ⁶⁵ Ga	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁶⁵ Ga	-	2E+4	6E-6	2E-8	-	-
32	Germanium-66	D, all compounds except those given for W	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
		W, oxides, sulfides, and halides	-	2E+4	8E-6	3E-8	-	-
32	Germanium-67 ²	D, see ⁶⁶ Ge	3E+4	9E+4	4E-5	1E-7	-	-
		W, see ⁶⁶ Ge	St wall (4E+4)	-	-	-	6E-4	6E-3
			-	1E+5	4E-5	1E-7	-	-
32	Germanium-68	D, see ⁶⁶ Ge	5E+3	4E+3	2E-6	5E-9	6E-5	6E-4
		W, see ⁶⁶ Ge	-	1E+2	4E-8	1E-10	-	-
32	Germanium-69	D, see ⁶⁶ Ge	1E+4	2E+4	6E-6	2E-8	2E-4	2E-3
		W, see ⁶⁶ Ge	-	8E+3	3E-6	1E-8	-	-
32	Germanium-71	D, see ⁶⁶ Ge	5E+5	4E+5	2E-4	6E-7	7E-3	7E-2
		W, see ⁶⁶ Ge	-	4E+4	2E-5	6E-8	-	-
32	Germanium-75 ²	D, see ⁶⁶ Ge	4E+4	8E+4	3E-5	1E-7	-	-
		W, see ⁶⁶ Ge	St wall (7E+4)	-	-	-	9E-4	9E-3
			-	8E+4	4E-5	1E-7	-	-
32	Germanium-77	D, see ⁶⁶ Ge	9E+3	1E+4	4E-6	1E-8	1E-4	1E-3
		W, see ⁶⁶ Ge	-	6E+3	2E-6	8E-9	-	-
32	Germanium-78 ²	D, see ⁶⁶ Ge	2E+4	2E+4	9E-6	3E-8	-	-
		W, see ⁶⁶ Ge	St wall (2E+4)	-	-	-	3E-4	3E-3
			-	2E+4	9E-6	3E-8	-	-
33	Arsenic-69 ²	W, all compounds	3E+4	1E+5	5E-5	2E-7	-	-
			St wall (4E+4)	-	-	-	6E-4	6E-3
33	Arsenic-70 ²	W, all compounds	1E+4	5E+4	2E-5	7E-8	2E-4	2E-3
33	Arsenic-71	W, all compounds	4E+3	5E+3	2E-6	6E-9	5E-5	5E-4
33	Arsenic-72	W, all compounds	9E+2	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-73	W, all compounds	8E+3	2E+3	7E-7	2E-9	1E-4	1E-3
33	Arsenic-74	W, all compounds	1E+3	8E+2	3E-7	1E-9	2E-5	2E-4
33	Arsenic-76	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-77	W, all compounds	4E+3	5E+3	2E-6	7E-9	-	-
			LLI wall (5E+3)	-	-	-	6E-5	6E-4
33	Arsenic-78 ²	W, all compounds	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	DAC μCi/ml				
34	Selenium-70 ²	D, all compounds except those given for W	2E+4	4E+4	2E-5	5E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and elemental Se	1E+4	4E+4	2E-5	6E-8	-	-
34	Selenium-73m ²	D, see ⁷⁰ Se	6E+4	2E+5	6E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	6E-5	2E-7	-	-
34	Selenium-73	D, see ⁷⁰ Se	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
		W, see ⁷⁰ Se	-	2E+4	7E-6	2E-8	-	-
34	Selenium-75	D, see ⁷⁰ Se	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
		W, see ⁷⁰ Se	-	6E+2	3E-7	8E-10	-	-
34	Selenium-79	D, see ⁷⁰ Se	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
		W, see ⁷⁰ Se	-	6E+2	2E-7	8E-10	-	-
34	Selenium-81m ²	D, see ⁷⁰ Se	4E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, see ⁷⁰ Se	2E+4	7E+4	3E-5	1E-7	-	-
34	Selenium-81 ²	D, see ⁷⁰ Se	6E+4	2E+5	9E-5	3E-7	-	-
		St wall (8E+4)	-	-	-	-	1E-3	1E-2
		W, see ⁷⁰ Se	-	2E+5	1E-4	3E-7	-	-
34	Selenium-83 ²	D, see ⁷⁰ Se	4E+4	1E+5	5E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	5E-5	2E-7	-	-
35	Bromine-74m ²	D, bromides of H, Li, Na, K, Rb, Cs, and Fr	1E+4 St wall (2E+4)	4E+4	2E-5	5E-8	-	-
		W, bromides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Mn, Tc, and Re	-	4E+4	2E-5	6E-8	-	-
			-	-	-	-	3E-4	3E-3
35	Bromine-74 ²	D, see ^{74m} Br	2E+4 St wall (4E+4)	7E+4	3E-5	1E-7	-	-
		W, see ^{74m} Br	-	8E+4	4E-5	1E-7	5E-45E-3	-
35	Bromine-75 ²	D, see ^{74m} Br	3E+4 St wall (4E+4)	5E+4	2E-5	7E-8	-	-
		W, see ^{74m} Br	-	5E+4	2E-5	7E-8	5E-4	5E-3
35	Bromine-76	D, see ^{74m} Br	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
		W, see ^{74m} Br	-	4E+3	2E-6	6E-9	-	-
35	Bromine-77	D, see ^{74m} Br	2E+4	2E+4	1E-5	3E-8	2E-4	2E-3
		W, see ^{74m} Br	-	2E+4	8E-6	3E-8	-	-
35	Bromine-80m	D, see ^{74m} Br	2E+4	2E+4	7E-6	2E-8	3E-4	3E-3
		W, see ^{74m} Br	-	1E+4	6E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
ALI μCi	ALI μCi	DAC $\mu\text{Ci/ml}$	Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$			
35	Bromine-80 ²	D, see ^{74m} Br	5E+4 St wall (9E+4)	2E+5	8E-5	3E-7	-	-
		W, see ^{74m} Br	-	2E+5	9E-5	3E-7	1E-3	1E-2
35	Bromine-82	D, see ^{74m} Br	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ^{74m} Br	-	4E+3	2E-6	5E-9	-	-
35	Bromine-83	D, see ^{74m} Br	5E+4 St wall (7E+4)	6E+4	3E-5	9E-8	-	-
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	9E-4	9E-3
35	Bromine-84 ²	D, see ^{74m} Br	2E+4 St wall (3E+4)	6E+4	2E-5	8E-8	-	-
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	4E-4	4E-3
36	Krypton-74 ²	Submersion ¹	-	-	3E-6	1E-8	-	-
36	Krypton-76	Submersion ¹	-	-	9E-6	4E-8	-	-
36	Krypton-77 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
36	Krypton-79	Submersion ¹	-	-	2E-5	7E-8	-	-
36	Krypton-81	Submersion ¹	-	-	7E-4	3E-6	-	-
36	Krypton-83m ²	Submersion ¹	-	-	1E-2	5E-5	-	-
36	Krypton-85m	Submersion ¹	-	-	2E-5	1E-7	-	-
36	Krypton-85	Submersion ¹	-	-	1E-4	7E-7	-	-
36	Krypton-87 ²	Submersion ¹	-	-	5E-6	2E-8	-	-
36	Krypton-88	Submersion ¹	-	-	2E-6	9E-9	-	-
37	Rubidium-79 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5	5E-5	2E-7	-	-
			-	-	-	8E-4	8E-3	
37	Rubidium-81m ²	D, all compounds	2E+5 St wall (3E+5)	3E+5	1E-4	5E-7	-	-
			-	-	-	4E-3	4E-2	
37	Rubidium-81	D, all compounds	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
37	Rubidium-82m	D, all compounds	1E+4	2E+4	7E-6	2E-8	2E-4	2E-3
37	Rubidium-83	D, all compounds	6E+2	1E+3	4E-7	1E-9	9E-6	9E-5
37	Rubidium-84	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-86	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-87	D, all compounds	1E+3	2E+3	6E-7	2E-9	1E-5	1E-4
37	Rubidium-88 ²	D, all compounds	2E+4 St wall (3E+4)	6E+4	3E-5	9E-8	-	-
			-	-	-	4E-4	4E-3	

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			4E+4	ALI μCi	DAC μCi/ml			
37	Rubidium-89 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5	6E-5	2E-7	-	-
38	Strontium-80 ²	D, all soluble compounds except SrTiO	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		Y, all insoluble com- pounds and SrTiO	-	1E+4	5E-6	2E-8	-	-
38	Strontium-81 ²	D, see ⁸⁰ Sr	3E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see ⁸⁰ Sr	2E+4	8E+4	3E-5	1E-7	-	-
38	Strontium-82	D, see ⁸⁰ Sr	3E+2 LLI wall (2E+2)	4E+2	2E-7	6E-10	-	-
		Y, see ⁸⁰ Sr	2E+2	9E+1	4E-8	1E-10	3E-6	3E-5
38	Strontium-83	D, see ⁸⁰ Sr	3E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, see ⁸⁰ Sr	2E+3	4E+3	1E-6	5E-9	-	-
38	Strontium-85m ²	D, see ⁸⁰ Sr	2E+5	6E+5	3E-4	9E-7	3E-3	3E-2
		Y, see ⁸⁰ Sr	-	8E+5	4E-4	1E-6	-	-
38	Strontium-85	D, see ⁸⁰ Sr	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
		Y, see ⁸⁰ Sr	-	2E+3	6E-7	2E-9	-	-
38	Strontium-87m	D, see ⁸⁰ Sr	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see ⁸⁰ Sr	4E+4	2E+5	6E-5	2E-7	-	-
38	Strontium-89	D, see ⁸⁰ Sr	6E+2 LLI wall (6E+2)	8E+2	4E-7	1E-9	-	-
		Y, see ⁸⁰ Sr	5E+2	1E+2	6E-8	2E-10	8E-6	8E-5
38	Strontium-90	D, see ⁸⁰ Sr	3E+1 Bone surf (4E+1)	2E+1 Bone surf (2E+1)	8E-9	-	-	-
		Y, see ⁸⁰ Sr	-	4E+0	2E-9	3E-11 6E-12	5E-7	5E-6
38	Strontium-91	D, see ⁸⁰ Sr	2E+3	6E+3	2E-6	8E-9	2E-5	2E-4
		Y, see ⁸⁰ Sr	-	4E+3	1E-6	5E-9	-	-
38	Strontium-92	D, see ⁸⁰ Sr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ⁸⁰ Sr	-	7E+3	3E-6	9E-9	-	-
39	Yttrium-86m ²	W, all compounds except those given for Y	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		Y, oxides and hydroxides	-	5E+4	2E-5	8E-8	-	-
39	Yttrium-86	W, see ^{86m} Y	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ^{86m} Y	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-87	W, see ^{86m} Y	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		Y, see ^{86m} Y	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-88	W, see ^{86m} Y	1E+3	3E+2	1E-7	3E-10	1E-5	1E-4
		Y, see ^{86m} Y	-	2E+2	1E-7	3E-10	-	-
39	Yttrium-90m	W, see ^{86m} Y	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
		Y, see ^{86m} Y	-	1E+4	5E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
39	Yttrium-90	W, see ^{86m} Y	4E+2	7E+2	3E-7	9E-10	-	-
		Y, see ^{86m} Y	LLI wall (5E+2)	-	-	-	7E-6	7E-5
39	Yttrium-91m ²	W, see ^{86m} Y	1E+5	2E+5	1E-4	3E-7	2E-3	2E-2
		Y, see ^{86m} Y	-	2E+5	7E-5	2E-7	-	-
39	Yttrium-91	W, see ^{86m} Y	5E+2	2E+2	7E-8	2E-10	-	-
		Y, see ^{86m} Y	LLI wall (6E+2)	-	-	-	8E-6	8E-5
39	Yttrium-92	W, see ^{86m} Y	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ^{86m} Y	-	8E+3	3E-6	1E-8	-	-
39	Yttrium-93	W, see ^{86m} Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see ^{86m} Y	-	2E+3	1E-6	3E-9	-	-
39	Yttrium-94 ²	W, see ^{86m} Y	2E+4	8E+4	3E-5	1E-7	-	-
		Y, see ^{86m} Y	St wall (3E+4)	-	-	-	4E-4	4E-3
39	Yttrium-95 ²	W, see ^{86m} Y	4E+4	2E+5	6E-5	2E-7	-	-
		Y, see ^{86m} Y	St wall (5E+4)	-	-	-	7E-4	7E-3
40	Zirconium-86	D, all compounds except those given for W and Y	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
		Y, carbide	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-88	D, see ⁸⁶ Zr	4E+3	2E+2	9E-8	3E-10	5E-5	5E-4
		W, see ⁸⁶ Zr	-	5E+2	2E-7	7E-10	-	-
		Y, see ⁸⁶ Zr	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-89	D, see ⁸⁶ Zr	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ⁸⁶ Zr	-	2E+3	1E-6	3E-9	-	-
		Y, see ⁸⁶ Zr	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-93	D, see ⁸⁶ Zr	1E+3	6E+0	3E-9	-	-	-
		W, see ⁸⁶ Zr	Bone surf (3E+3)	Bone surf (2E+1)	-	2E-11	4E-5	4E-4
		-	-	2E+1	1E-8	-	-	-
		Y, see ⁸⁶ Zr	-	Bone surf (6E+1)	-	9E-11	-	-
40	Zirconium-95	D, see ⁸⁶ Zr	1E+3	1E+2	5E-8	-	2E-5	2E-4
		W, see ⁸⁶ Zr	-	Bone surf (3E+2)	-	4E-10	-	-
		Y, see ⁸⁶ Zr	-	4E+2	2E-7	5E-10	-	-
		-	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-97	D, see ⁸⁶ Zr	6E+2	2E+3	8E-7	3E-9	9E-6	9E-5
		W, see ⁸⁶ Zr	-	1E+3	6E-7	2E-9	-	-
		Y, see ⁸⁶ Zr	-	1E+3	5E-7	2E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
41	Niobium-88 ²	W, all compounds except those given for Y	5E+4 St wall (7E+4)	2E+5	9E-5	3E-7	-	-
		Y, oxides and hydroxides	-	2E+5	9E-5	3E-7	1E-3	1E-2
41	Niobium-89 ² (66 min)	W, see ⁸⁸ Nb	1E+4	4E+4	2E-5	6E-8	1E-4	1E-3
		Y, see ⁸⁸ Nb	-	4E+4	2E-5	5E-8	-	-
41	Niobium-89 (122 min)	W, see ⁸⁸ Nb	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ⁸⁸ Nb	-	2E+4	6E-6	2E-8	-	-
41	Niobium-90	W, see ⁸⁸ Nb	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		Y, see ⁸⁸ Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-93m	W, see ⁸⁸ Nb	9E+3 LLI wall (1E+4)	2E+3	8E-7	3E-9	-	-
		Y, see ⁸⁸ Nb	-	2E+2	7E-8	2E-10	2E-4	2E-3
41	Niobium-94	W, see ⁸⁸ Nb	9E+2	2E+2	8E-8	3E-10	1E-5	1E-4
		Y, see ⁸⁸ Nb	-	2E+1	6E-9	2E-11	-	-
41	Niobium-95m	W, see ⁸⁸ Nb	2E+3 LLI wall (2E+3)	3E+3	1E-6	4E-9	-	-
		Y, see ⁸⁸ Nb	-	2E+3	9E-7	3E-9	3E-5	3E-4
41	Niobium-95	W, see ⁸⁸ Nb	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		Y, see ⁸⁸ Nb	-	1E+3	5E-7	2E-9	-	-
41	Niobium-96	W, see ⁸⁸ Nb	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see ⁸⁸ Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-97 ²	W, see ⁸⁸ Nb	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see ⁸⁸ Nb	-	7E+4	3E-5	1E-7	-	-
41	Niobium-98 ²	W, see ⁸⁸ Nb	1E+4	5E+4	2E-5	8E-8	2E-4	2E-3
		Y, see ⁸⁸ Nb	-	5E+4	2E-5	7E-8	-	-
42	Molybdenum-90	D, all compounds except those given for Y	4E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, oxides, hydroxides, and MoS	2E+3	5E+3	2E-6	6E-9	-	-
42	Molybdenum-93m	D, see ⁹⁰ Mo	9E+3	2E+4	7E-6	2E-8	6E-5	6E-4
		Y, see ⁹⁰ Mo	4E+3	1E+4	6E-6	2E-8	-	-
42	Molybdenum-93	D, see ⁹⁰ Mo	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		Y, see ⁹⁰ Mo	2E+4	2E+2	8E-8	2E-10	-	-
42	Molybdenum-99	D, see ⁹⁰ Mo	2E+3 LLI wall (1E+3)	3E+3	1E-6	4E-9	-	-
		Y, see ⁹⁰ Mo	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
42	Molybdenum-101 ²	D, see ⁹⁰ Mo	4E+4 St wall (5E+4)	1E+5	6E-5	2E-7	-	-
		Y, see ⁹⁰ Mo	-	1E+5	6E-5	2E-7	7E-4	7E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
43	Technetium-93m ²	D, all compounds except those given for W W, oxides, hydroxides, halides, and nitrates	7E+4 -	2E+5 3E+5	6E-5 1E-4	2E-7 4E-7	1E-3 -	1E-2 -
43	Technetium-93	D, see ^{93m} Tc W, see ^{93m} Tc	3E+4 -	7E+4 1E+5	3E-5 4E-5	1E-7 1E-7	4E-4 -	4E-3 -
43	Technetium-94m ²	D, see ^{93m} Tc W, see ^{93m} Tc	2E+4 -	4E+4 6E+4	2E-5 2E-5	6E-8 8E-8	3E-4 -	3E-3 -
43	Technetium-94	D, see ^{93m} Tc W, see ^{93m} Tc	9E+3 -	2E+4 2E+4	8E-6 1E-5	3E-8 3E-8	1E-4 -	1E-3 -
43	Technetium-95m	D, see ^{93m} Tc W, see ^{93m} Tc	4E+3 -	5E+3 2E+3	2E-6 8E-7	8E-9 3E-9	5E-5 -	5E-4 -
43	Technetium-95	D, see ^{93m} Tc W, see ^{93m} Tc	1E+4 -	2E+4 2E+4	9E-6 8E-6	3E-8 3E-8	1E-4 -	1E-3 -
43	Technetium-96m ²	D, see ^{93m} Tc W, see ^{93m} Tc	2E+5 -	3E+5 2E+5	1E-4 1E-4	4E-7 3E-7	2E-3 -	2E-2 -
43	Technetium-96	D, see ^{93m} Tc W, see ^{93m} Tc	2E+3 -	3E+3 2E+3	1E-6 9E-7	5E-9 3E-9	3E-5 -	3E-4 -
43	Technetium-97m	D, see ^{93m} Tc W, see ^{93m} Tc	5E+3 - -	7E+3 St wall (7E+3) 1E+3	3E-6 - 5E-7	- 1E-8 2E-9	6E-5 - -	6E-4 - -
43	Technetium-97	D, see ^{93m} Tc W, see ^{93m} Tc	4E+4 -	5E+4 6E+3	2E-5 2E-6	7E-8 8E-9	5E-4 -	5E-3 -
43	Technetium-98	D, see ^{93m} Tc W, see ^{93m} Tc	1E+3 -	2E+3 3E+2	7E-7 1E-7	2E-9 4E-10	1E-5 -	1E-4 -
43	Technetium-99m	D, see ^{93m} Tc W, see ^{93m} Tc	8E+4 -	2E+5 2E+5	6E-5 1E-4	2E-7 3E-7	1E-3 -	1E-2 -
43	Technetium-99	D, see ^{93m} Tc W, see ^{93m} Tc	4E+3 - -	5E+3 St wall (6E+3) 7E+2	2E-6 - 3E-7	- 8E-9 9E-10	6E-5 - -	6E-4 - -
43	Technetium-101 ²	D, see ^{93m} Tc W, see ^{93m} Tc	9E+4 St wall (1E+5) -	3E+5 - 4E+5	1E-4 - 2E-4	5E-7 - 5E-7	- 2E-3 -	- 2E-2 -
43	Technetium-104 ²	D, see ^{93m} Tc W, see ^{93m} Tc	2E+4 St wall (3E+4) -	7E+4 - 9E+4	3E-5 - 4E-5	1E-7 - 1E-7	- 4E-4 -	- 4E-3 -
44	Ruthenium-94 ²	D, all compounds except those given for W and Y W, halides Y, oxides and hydroxides	2E+4 - -	4E+4 6E+4 6E+4	2E-5 3E-5 2E-5	6E-8 9E-8 8E-8	2E-4 - -	2E-3 - -
44	Ruthenium-97	D, see ⁹⁴ Ru W, see ⁹⁴ Ru Y, see ⁹⁴ Ru	8E+3 - -	2E+4 1E+4 1E+4	8E-6 5E-6 5E-6	3E-8 2E-8 2E-8	1E-4 - -	1E-3 - -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
44	Ruthenium-103	D, see ^{94}Ru	2E+3	2E+3	7E-7	2E-9	3E-5	3E-4
		W, see ^{94}Ru	-	1E+3	4E-7	1E-9	-	-
		Y, see ^{94}Ru	-	6E+2	3E-7	9E-10	-	-
44	Ruthenium-105	D, see ^{94}Ru	5E+3	1E+4	6E-6	2E-8	7E-5	7E-4
		W, see ^{94}Ru	-	1E+4	6E-6	2E-8	-	-
		Y, see ^{94}Ru	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-106	D, see ^{94}Ru	2E+2	9E+1	4E-8	1E-10	-	-
		LLI wall (2E+2)	-	-	-	-	3E-6	3E-5
		W, see ^{94}Ru	-	5E+1	2E-8	8E-11	-	-
		Y, see ^{94}Ru	-	1E+1	5E-9	2E-11	-	-
45	Rhodium-99m	D, all compounds except those given for W and Y	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		W, halides	-	8E+4	3E-5	1E-7	-	-
		Y, oxides and hydroxides	-	7E+4	3E-5	9E-8	-	-
45	Rhodium-99	D, see ^{99m}Rh	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ^{99m}Rh	-	2E+3	9E-7	3E-9	-	-
		Y, see ^{99m}Rh	-	2E+3	8E-7	3E-9	-	-
45	Rhodium-100	D, see ^{99m}Rh	2E+3	5E+3	2E-6	7E-9	2E-5	2E-4
		W, see ^{99m}Rh	-	4E+3	2E-6	6E-9	-	-
		Y, see ^{99m}Rh	-	4E+3	2E-6	5E-9	-	-
45	Rhodium-101m	D, see ^{99m}Rh	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{99m}Rh	-	8E+3	4E-6	1E-8	-	-
		Y, see ^{99m}Rh	-	8E+3	3E-6	1E-8	-	-
45	Rhodium-101	D, see ^{99m}Rh	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ^{99m}Rh	-	8E+2	3E-7	1E-9	-	-
		Y, see ^{99m}Rh	-	2E+2	6E-8	2E-10	-	-
45	Rhodium-102m	D, see ^{99m}Rh	1E+3	5E+2	2E-7	7E-10	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		W, see ^{99m}Rh	-	4E+2	2E-7	5E-10	-	-
		Y, see ^{99m}Rh	-	1E+2	5E-8	2E-10	-	-
45	Rhodium-102	D, see ^{99m}Rh	6E+2	9E+1	4E-8	1E-10	8E-6	8E-5
		W, see ^{99m}Rh	-	2E+2	7E-8	2E-10	-	-
		Y, see ^{99m}Rh	-	6E+1	2E-8	8E-11	-	-
45	Rhodium-103m ²	D, see ^{99m}Rh	4E+5	1E+6	5E-4	2E-6	6E-3	6E-2
		W, see ^{99m}Rh	-	1E+6	5E-4	2E-6	-	-
		Y, see ^{99m}Rh	-	1E+6	5E-4	2E-6	-	-
45	Rhodium-105	D, see ^{99m}Rh	4E+3	1E+4	5E-6	2E-8	-	-
		LLI wall (4E+3)	-	-	-	-	5E-5	5E-4
		W, see ^{99m}Rh	-	6E+3	3E-6	9E-9	-	-
		Y, see ^{99m}Rh	-	6E+3	2E-6	8E-9	-	-
45	Rhodium-106m	D, see ^{99m}Rh	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, see ^{99m}Rh	-	4E+4	2E-5	5E-8	-	-
		Y, see ^{99m}Rh	-	4E+4	1E-5	5E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
45	Rhodium-107 ²	D, see ^{99m} Rh	7E+4 St wall (9E+4)	2E+5	1E-4	3E-7	-	-
		W, see ^{99m} Rh	-	3E+5	1E-4	4E-7	-	-
		Y, see ^{99m} Rh	-	3E+5	1E-4	3E-7	-	-
46	Palladium-100	D, all compounds except those given for W and Y	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
		W, nitrates	-	1E+3	5E-7	2E-9	-	-
		Y, oxides and hydroxides	-	1E+3	6E-7	2E-9	-	-
46	Palladium-101	D, see ¹⁰⁰ Pd	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ¹⁰⁰ Pd	-	3E+4	1E-5	5E-8	-	-
		Y, see ¹⁰⁰ Pd	-	3E+4	1E-5	4E-8	-	-
46	Palladium-103	D, see ¹⁰⁰ Pd	6E+3 LLI wall (7E+3)	6E+3	3E-6	9E-9	-	-
		W, see ¹⁰⁰ Pd	-	4E+3	2E-6	6E-9	1E-4	1E-3
		Y, see ¹⁰⁰ Pd	-	4E+3	1E-6	5E-9	-	-
46	Palladium-107	D, see ¹⁰⁰ Pd	3E+4 LLI wall (4E+4)	2E+4 Kidneys (2E+4)	9E-6	-	-	-
		W, see ¹⁰⁰ Pd	-	7E+3	3E-6	1E-8	5E-4	5E-3
		Y, see ¹⁰⁰ Pd	-	4E+2	2E-7	6E-10	-	-
46	Palladium-109	D, see ¹⁰⁰ Pd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		W, see ¹⁰⁰ Pd	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁰⁰ Pd	-	5E+3	2E-6	6E-9	-	-
47	Silver-102 ²	D, all compounds except those given for W and Y	5E+4 St wall (6E+4)	2E+5	8E-5	2E-7	-	-
		W, nitrates and sulfides	-	2E+5	9E-5	3E-7	9E-4	9E-3
		Y, oxides and hydroxides	-	2E+5	8E-5	3E-7	-	-
47	Silver-103 ²	D, see ¹⁰² Ag	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104m ²	D, see ¹⁰² Ag	3E+4	9E+4	4E-5	1E-7	4E-4	4E-3
		W, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104 ²	D, see ¹⁰² Ag	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
		W, see ¹⁰² Ag	-	1E+5	6E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	6E-5	2E-7	-	-
47	Silver-105	D, see ¹⁰² Ag	3E+3	1E+3	4E-7	1E-9	4E-5	4E-4
		W, see ¹⁰² Ag	-	2E+3	7E-7	2E-9	-	-
		Y, see ¹⁰² Ag	-	2E+3	7E-7	2E-9	-	-
47	Silver-106m	D, see ¹⁰² Ag	8E+2	7E+2	3E-7	1E-9	1E-5	1E-4
		W, see ¹⁰² Ag	-	9E+2	4E-7	1E-9	-	-
		Y, see ¹⁰² Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-106 ²	D, see ¹⁰² Ag	6E+4 St. wall (6E+4)	2E+5	8E-5	3E-7	-	-
		W, see ¹⁰² Ag	-	2E+5	9E-5	3E-7	9E-4	9E-3
		Y, see ¹⁰² Ag	-	2E+5	8E-5	3E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
		ALI μCi	DAC $\mu\text{Ci/ml}$			$\mu\text{Ci/ml}$		
47	Silver-108m	D, see ^{102}Ag	6E+2	2E+2	8E-8	3E-10	9E-6	9E-5
		W, see ^{102}Ag	-	3E+2	1E-7	4E-10	-	-
		Y, see ^{102}Ag	-	2E+1	1E-8	3E-11	-	-
47	Silver-110m	D, see ^{102}Ag	5E+2	1E+2	5E-8	2E-10	6E-6	6E-5
		W, see ^{102}Ag	-	2E+2	8E-8	3E-10	-	-
		Y, see ^{102}Ag	-	9E+1	4E-8	1E-10	-	-
47	Silver-111	D, see ^{102}Ag	9E+2	2E+3	6E-7	-	-	-
		LLI wall (1E+3)	-	Liver (2E+3)	-	2E-9	2E-5	2E-4
		W, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-112	Y, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
		D, see ^{102}Ag	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ^{102}Ag	-	1E+4	4E-6	1E-8	-	-
47	Silver-115 ²	Y, see ^{102}Ag	-	9E+3	4E-6	1E-8	-	-
		D, see ^{102}Ag	3E+4	9E+4	4E-5	1E-7	-	-
		St wall (3E+4)	-	-	-	-	4E-4	4E-3
48	Cadmium-104 ²	W, see ^{102}Ag	-	9E+4	4E-5	1E-7	-	-
		Y, see ^{102}Ag	-	8E+4	3E-5	1E-7	-	-
		D, all compounds except those given for W and Y W, sulfides, halides, and nitrates Y, oxides and hydroxides	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
48	Cadmium-107	W, see ^{104}Cd	-	1E+5	5E-5	2E-7	-	-
		Y, see ^{104}Cd	-	1E+5	5E-5	2E-7	-	-
		D, see ^{104}Cd	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
48	Cadmium-109	W, see ^{104}Cd	-	6E+4	2E-5	8E-8	-	-
		Y, see ^{104}Cd	-	5E+4	2E-5	7E-8	-	-
		D, see ^{104}Cd	3E+2	4E+1	1E-8	-	-	-
48	Cadmium-113m	Kidneys (4E+2)	-	Kidneys (5E+1)	-	7E-11	6E-6	6E-5
		W, see ^{104}Cd	-	1E+2	5E-8	-	-	-
		Y, see ^{104}Cd	-	Kidneys (1E+2)	-	2E-10	-	-
48	Cadmium-113	D, see ^{104}Cd	2E+1	2E+0	1E-9	-	-	-
		W, see ^{104}Cd	-	Kidneys (4E+0)	-	5E-12	5E-7	5E-6
		Y, see ^{104}Cd	-	8E+0	4E-9	-	-	-
48	Cadmium-115	D, see ^{104}Cd	2E+1	2E+0	9E-10	-	-	-
		W, see ^{104}Cd	-	Kidneys (3E+0)	-	5E-12	4E-7	4E-6
		Y, see ^{104}Cd	-	8E+0	3E-9	-	-	-
48	Cadmium-115m	D, see ^{104}Cd	3E+2	5E+1	2E-8	-	4E-6	4E-5
		W, see ^{104}Cd	-	Kidneys (8E+1)	-	1E-10	-	-
		Y, see ^{104}Cd	-	1E+2	5E-8	2E-10	-	-
			-	1E+2	6E-8	2E-10	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
48	Cadmium-115	D, see ¹⁰⁴ Cd	9E+2	1E+3	6E-7	2E-9	-	-
			LLI wall (1E+3)	-	-	-	1E-5	1E-4
		W, see ¹⁰⁴ Cd	-	1E+3	5E-7	2E-9	-	-
		Y, see ¹⁰⁴ Cd	-	1E+3	6E-7	2E-9	-	-
48	Cadmium-117m	D, see ¹⁰⁴ Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ¹⁰⁴ Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ¹⁰⁴ Cd	-	1E+4	6E-6	2E-8	-	-
48	Cadmium-117	D, see ¹⁰⁴ Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ¹⁰⁴ Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ¹⁰⁴ Cd	-	1E+4	6E-6	2E-8	-	-
49	Indium-109	D, all compounds except those given for W	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	9E-8	-	-
49	Indium-110 ² (69.1 min)	D, see ¹⁰⁹ In	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁰⁹ In	-	6E+4	2E-5	8E-8	-	-
49	Indium-110 (4.9 h)	D, see ¹⁰⁹ In	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		W, see ¹⁰⁹ In	-	2E+4	8E-6	3E-8	-	-
49	Indium-111	D, see ¹⁰⁹ In	4E+3	6E+3	3E-6	9E-9	6E-5	6E-4
		W, see ¹⁰⁹ In	-	6E+3	3E-6	9E-9	-	-
49	Indium-112 ²	D, see ¹⁰⁹ In	2E+5	6E+5	3E-4	9E-7	2E-3	2E-2
		W, see ¹⁰⁹ In	-	7E+5	3E-4	1E-6	-	-
49	Indium-113m ²	D, see ¹⁰⁹ In	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		W, see ¹⁰⁹ In	-	2E+5	8E-5	3E-7	-	-
49	Indium-114m	D, see ¹⁰⁹ In	3E+2	6E+1	3E-8	9E-11	-	-
			LLI wall (4E+2)	-	-	-	5E-6	5E-5
		W, see ¹⁰⁹ In	-	1E+2	4E-8	1E-10	-	-
49	Indium-115m	D, see ¹⁰⁹ In	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁰⁹ In	-	5E+4	2E-5	7E-8	-	-
49	Indium-115	D, see ¹⁰⁹ In	4E+1	1E+0	6E-10	2E-12	5E-7	5E-6
		W, see ¹⁰⁹ In	-	5E+0	2E-9	8E-12	-	-
49	Indium-116m ²	D, see ¹⁰⁹ In	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		W, see ¹⁰⁹ In	-	1E+5	5E-5	2E-7	-	-
49	Indium-117m ²	D, see ¹⁰⁹ In	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ¹⁰⁹ In	-	4E+4	2E-5	6E-8	-	-
49	Indium-117 ²	D, see ¹⁰⁹ In	6E+4	2E+5	7E-5	2E-7	8E-4	8E-3
		W, see ¹⁰⁹ In	-	2E+5	9E-5	3E-7	-	-
49	Indium-119m ²	D, see ¹⁰⁹ In	4E+4	1E+5	5E-5	2E-7	-	-
			St wall (5E+4)	-	-	-	7E-4	7E-3
		W, see ¹⁰⁹ In	-	1E+5	6E-5	2E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration $\mu\text{Ci/ml}$
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
ALI μCi	ALI μCi	DAC $\mu\text{Ci/ml}$	Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$			
50	Tin-110	D, all compounds except those given for W W, sulfides, oxides, hydroxides, halides, nitrates, and stannic phosphate	4E+3 -	1E+4 1E+4	5E-6 5E-6	2E-8 2E-8	5E-5 -	5E-4 -
50	Tin-111 ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	7E+4 -	2E+5 3E+5	9E-5 1E-4	3E-7 4E-7	1E-3 -	1E-2 -
50	Tin-113	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3) -	1E+3 5E+2	5E-7 2E-7	2E-9 8E-10	- 3E-5 -	- 3E-4 -
50	Tin-117m	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3) -	1E+3 Bone surf (2E+3) 1E+3	5E-7 - 6E-7	- 3E-9 2E-9	- 3E-5 -	- 3E-4 -
50	Tin-119m	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3) -	2E+3 1E+3	1E-6 -	3E-9 -	- 6E-5 -	- 6E-4 -
50	Tin-121m	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3) -	9E+2 5E+2	4E-7 2E-7	1E-9 8E-10	- 5E-5 -	- 5E-4 -
50	Tin-121	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	6E+3 LLI wall (6E+3) -	2E+4 1E+4	6E-6 5E-6	2E-8 2E-8	- 8E-5 -	- 8E-4 -
50	Tin-123m ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	5E+4 -	1E+5 1E+5	5E-5 6E-5	2E-7 2E-7	7E-4 -	7E-3 -
50	Tin-123	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	5E+2 LLI wall (6E+2) -	6E+2 2E+2	3E-7 7E-8	9E-10 2E-10	- 9E-6 -	- 9E-5 -
50	Tin-125	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	4E+2 LLI wall (5E+2) -	9E+2 4E+2	4E-7 1E-7	1E-9 5E-10	- 6E-6 -	- 6E-5 -
50	Tin-126	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	3E+2 -	6E+1 7E+1	2E-8 3E-8	8E-11 9E-11	4E-6 -	4E-5 -
50	Tin-127	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	7E+3 -	2E+4 2E+4	8E-6 8E-6	3E-8 3E-8	9E-5 -	9E-4 -
50	Tin-128 ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	9E+3 -	3E+4 4E+4	1E-5 1E-5	4E-8 5E-8	1E-4 -	1E-3 -
51	Antimony-115 ²	D, all compounds except those given for W W, oxides, hydroxides, halides, sulfides, sulfates, and nitrates	8E+4 -	2E+5 3E+5	1E-4 1E-4	3E-7 4E-7	1E-3 -	1E-2 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
	ALI μCi	DAC $\mu\text{Ci/ml}$			$\mu\text{Ci/ml}$			
51	Antimony-116m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 -	7E+4 1E+5	3E-5 6E-5	1E-7 2E-7	3E-4 -	3E-3 -
51	Antimony-116 ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	7E+4 St wall (9E+4) -	3E+5 - 3E+5	1E-4 - 1E-4	4E-7 - 5E-7	- 1E-3 -	- 1E-2 -
51	Antimony-117	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	7E+4 -	2E+5 3E+5	9E-5 1E-4	3E-7 4E-7	9E-4 -	9E-3 -
51	Antimony-118m	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+3 5E+3	2E+4 2E+4	8E-6 9E-6	3E-8 3E-8	7E-5 -	7E-4 -
51	Antimony-119	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 2E+4	5E+4 3E+4	2E-5 1E-5	6E-8 4E-8	2E-4 -	2E-3 -
51	Antimony-120 ² (16 min)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+5 St wall (2E+5) -	4E+5 - 5E+5	2E-4 - 2E-4	6E-7 - 7E-7	- 2E-3 -	- 2E-2 -
51	Antimony-120 (5.76 d)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+3 9E+2	2E+3 1E+3	9E-7 5E-7	3E-9 2E-9	1E-5 -	1E-4 -
51	Antimony-122	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	8E+2 LLI wall (8E+2) 7E+2	2E+3 - 1E+3	1E-6 - 4E-7	3E-9 - 2E-9	- 1E-5 -	- 1E-4 -
51	Antimony-124m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	3E+5 2E+5	8E+5 6E+5	4E-4 2E-4	1E-6 8E-7	3E-3 -	3E-2 -
51	Antimony-124	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	9E+2 2E+2	4E-7 1E-7	1E-9 3E-10	7E-6 -	7E-5 -
51	Antimony-125	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+3 -	2E+3 5E+2	1E-6 2E-7	3E-9 7E-10	3E-5 -	3E-4 -
51	Antimony-126m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	5E+4 St wall (7E+4) -	2E+5 - 2E+5	8E-5 - 8E-5	3E-7 - 3E-7	- 9E-4 -	- 9E-3 -
51	Antimony-126	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	1E+3 5E+2	5E-7 2E-7	2E-9 7E-10	7E-6 -	7E-5 -
51	Antimony-127	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	8E+2 LLI wall (8E+2) 7E+2	2E+3 - 9E+2	9E-7 - 4E-7	3E-9 - 1E-9	- 1E-5 -	- 1E-4 -
51	Antimony-128 ² (10.4 min)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	8E+4 St wall (1E+5) -	4E+5 - 4E+5	2E-4 - 2E-4	5E-7 - 6E-7	- 1E-3 -	- 1E-2 -
51	Antimony-128 (9.01 h)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+3 -	4E+3 3E+3	2E-6 1E-6	6E-9 5E-9	2E-5 -	2E-4 -
51	Antimony-129	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	3E+3 -	9E+3 9E+3	4E-6 4E-6	1E-8 1E-8	4E-5 -	4E-4 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
51	Antimony-130 ²	D, see ¹¹⁵ Sb	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, see ¹¹⁵ Sb	-	8E+4	3E-5	1E-7	-	-
51	Antimony-131 ²	D, see ¹¹⁵ Sb	1E+4	2E+4	1E-5	-	-	-
			Thyroid (2E+4)	Thyroid (4E+4)	-	6E-8	2E-4	2E-3
		W, see ¹¹⁵ Sb	-	2E+4	1E-5	-	-	-
			Thyroid (4E+4)	-	6E-8	-	-	
52	Tellurium-116	D, all compounds except those given for W	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, oxides, hydroxides, and nitrates	-	3E+4	1E-5	4E-8	-	-
52	Tellurium-121m	D, see ¹¹⁶ Te	5E+2	2E+2	8E-8	-	-	-
			Bone surf (7E+2)	Bone surf (4E+2)	-	5E-10	1E-5	1E-4
		W, see ¹¹⁶ Te	-	4E+2	2E-7	6E-10	-	-
52	Tellurium-121	D, see ¹¹⁶ Te	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ¹¹⁶ Te	-	3E+3	1E-6	4E-9	-	-
52	Tellurium-123m	D, see ¹¹⁶ Te	6E+2	2E+2	9E-8	-	-	-
			Bone surf (1E+3)	Bone surf (5E+2)	-	8E-10	1E-5	1E-4
		W, see ¹¹⁶ Te	-	5E+2	2E-7	8E-10	-	-
52	Tellurium-123	D, see ¹¹⁶ Te	5E+2	2E+2	8E-8	-	-	-
			Bone surf (1E+3)	Bone surf (5E+2)	-	7E-10	2E-5	2E-4
		W, see ¹¹⁶ Te	-	4E+2	2E-7	-	-	-
				Bone surf (1E+3)	-	2E-9	-	-
52	Tellurium-125m	D, see ¹¹⁶ Te	1E+3	4E+2	2E-7	-	-	-
			Bone surf (1E+3)	Bone surf (1E+3)	-	1E-9	2E-5	2E-4
		W, see ¹¹⁶ Te	-	7E+2	3E-7	1E-9	-	-
52	Tellurium-127m	D, see ¹¹⁶ Te	6E+2	3E+2	1E-7	-	9E-6	9E-5
				Bone surf (4E+2)	-	6E-10	-	-
		W, see ¹¹⁶ Te	-	3E+2	1E-7	4E-10	-	-
52	Tellurium-127	D, see ¹¹⁶ Te	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ¹¹⁶ Te	-	2E+4	7E-6	2E-8	-	-
52	Tellurium-129m	D, see ¹¹⁶ Te	5E+2	6E+2	3E-7	9E-10	7E-6	7E-5
		W, see ¹¹⁶ Te	-	2E+2	1E-7	3E-10	-	-
52	Tellurium-129 ²	D, see ¹¹⁶ Te	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ¹¹⁶ Te	-	7E+4	3E-5	1E-7	-	-
52	Tellurium-131m	D, see ¹¹⁶ Te	3E+2	4E+2	2E-7	-	-	-
			Thyroid (6E+2)	Thyroid (1E+3)	-	2E-9	8E-6	8E-5
		W, see ¹¹⁶ Te	-	4E+2	2E-7	-	-	-
				Thyroid (9E+2)	-	1E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
52	Tellurium-131 ²	D, see ¹¹⁶ Te	3E+3 Thyroid (6E+3)	5E+3 Thyroid (1E+4)	2E-6	-	-	-
		W, see ¹¹⁶ Te	-	5E+3 Thyroid (1E+4)	2E-6	2E-8	8E-5	8E-4
			-			2E-8	-	-
52	Tellurium-132	D, see ¹¹⁶ Te	2E+2 Thyroid (7E+2)	2E+2 Thyroid (8E+2)	9E-8	-	-	-
		W, see ¹¹⁶ Te	-	2E+2 Thyroid (6E+2)	9E-8	1E-9	9E-6	9E-5
			-			9E-10	-	-
52	Tellurium-133m ²	D, see ¹¹⁶ Te	3E+3 Thyroid (6E+3)	5E+3 Thyroid (1E+4)	2E-6	-	-	-
		W, see ¹¹⁶ Te	-	5E+3 Thyroid (1E+4)	2E-6	2E-8	9E-5	9E-4
			-			2E-8	-	-
52	Tellurium-133 ²	D, see ¹¹⁶ Te	1E+4 Thyroid (3E+4)	2E+4 Thyroid (6E+4)	9E-6	-	-	-
		W, see ¹¹⁶ Te	-	2E+4 Thyroid (6E+4)	9E-6	8E-8	4E-4	4E-3
			-			8E-8	-	-
52	Tellurium-134 ²	D, see ¹¹⁶ Te	2E+4 Thyroid (2E+4)	2E+4 Thyroid (5E+4)	1E-5	-	-	-
		W, see ¹¹⁶ Te	-	2E+4 Thyroid (5E+4)	1E-5	7E-8	3E-4	3E-3
			-			7E-8	-	-
53	Iodine-120m ²	D, all compounds	1E+4 Thyroid (1E+4)	2E+4	9E-6	3E-8	-	-
							2E-4	2E-3
53	Iodine-120 ²	D, all compounds	4E+3 Thyroid (8E+3)	9E+3 Thyroid (1E+4)	4E-6	-	-	-
						2E-8	1E-4	1E-3
53	Iodine-121	D, all compounds	1E+4 Thyroid (3E+4)	2E+4 Thyroid (5E+4)	8E-6	-	-	-
						7E-8	4E-4	4E-3
53	Iodine-123	D, all compounds	3E+3 Thyroid (1E+4)	6E+3 Thyroid (2E+4)	3E-6	-	-	-
						2E-8	1E-4	1E-3
53	Iodine-124	D, all compounds	5E+1 Thyroid (2E+2)	8E+1 Thyroid (3E+2)	3E-8	-	-	-
						4E-10	2E-6	2E-5
53	Iodine-125	D, all compounds	4E+1 Thyroid (1E+2)	6E+1 Thyroid (2E+2)	3E-8	-	-	-
						3E-10	2E-6	2E-5
53	Iodine-126	D, all compounds	2E+1 Thyroid (7E+1)	4E+1 Thyroid (1E+2)	1E-8	-	-	-
						2E-10	1E-6	1E-5

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
53	Iodine-128 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5	5E-5	2E-7	- 8E-4	- 8E-3
53	Iodine-129	D, all compounds	5E+0 Thyroid (2E+1)	9E+0 Thyroid (3E+1)	4E-9	- 4E-11	- 2E-7	- 2E-6
53	Iodine-130	D, all compounds	4E+2 Thyroid (1E+3)	7E+2 Thyroid (2E+3)	3E-7	- 3E-9	- 2E-5	- 2E-4
53	Iodine-131	D, all compounds	3E+1 Thyroid (9E+1)	5E+1 Thyroid (2E+2)	2E-8	- 2E-10	- 1E-6	- 1E-5
53	Iodine-132m ²	D, all compounds	4E+3 Thyroid (1E+4)	8E+3 Thyroid (2E+4)	4E-6	- 3E-8	- 1E-4	- 1E-3
53	Iodine-132	D, all compounds	4E+3 Thyroid (9E+3)	8E+3 Thyroid (1E+4)	3E-6	- 2E-8	- 1E-4	- 1E-3
53	Iodine-133	D, all compounds	1E+2 Thyroid (5E+2)	3E+2 Thyroid (9E+2)	1E-7	- 1E-9	- 7E-6	- 7E-5
53	Iodine-134 ²	D, all compounds	2E+4 Thyroid (3E+4)	5E+4	2E-5	6E-8	- 4E-4	- 4E-3
53	Iodine-135	D, all compounds	8E+2 Thyroid (3E+3)	2E+3 Thyroid (4E+3)	7E-7	- 6E-9	- 3E-5	- 3E-4
54	Xenon-120 ²	Submersion ¹	-	-	1E-5	4E-8	-	-
54	Xenon-121 ²	Submersion ¹	-	-	2E-6	1E-8	-	-
54	Xenon-122	Submersion ¹	-	-	7E-5	3E-7	-	-
54	Xenon-123	Submersion ¹	-	-	6E-6	3E-8	-	-
54	Xenon-125	Submersion ¹	-	-	2E-5	7E-8	-	-
54	Xenon-127	Submersion ¹	-	-	1E-5	6E-8	-	-
54	Xenon-129m	Submersion ¹	-	-	2E-4	9E-7	-	-
54	Xenon-131m	Submersion ¹	-	-	4E-4	2E-6	-	-
54	Xenon-133m	Submersion ¹	-	-	1E-4	6E-7	-	-
54	Xenon-133	Submersion ¹	-	-	1E-4	5E-7	-	-
54	Xenon-135m ²	Submersion ¹	-	-	9E-6	4E-8	-	-
54	Xenon-135	Submersion ¹	-	-	1E-5	7E-8	-	-
54	Xenon-138 ²	Submersion ¹	-	-	4E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
55	Cesium-125 ²	D, all compounds	5E+4 St wall (9E+4)	1E+5	6E-5	2E-7	- 1E-3	- 1E-2
55	Cesium-127	D, all compounds	6E+4	9E+4	4E-5	1E-7	9E-4	9E-3
55	Cesium-129	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
55	Cesium-130 ²	D, all compounds	6E+4 St wall (1E+5)	2E+5	8E-5	3E-7	- 1E-3	- 1E-2
55	Cesium-131	D, all compounds	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
55	Cesium-132	D, all compounds	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
55	Cesium-134m	D, all compounds	1E+5 St wall (1E+5)	1E+5	6E-5	2E-7	- 2E-3	- 2E-2
55	Cesium-134	D, all compounds	7E+1	1E+2	4E-8	2E-10	9E-7	9E-6
55	Cesium-135m ²	D, all compounds	1E+5	2E+5	8E-5	3E-7	1E-3	1E-2
55	Cesium-135	D, all compounds	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
55	Cesium-136	D, all compounds	4E+2	7E+2	3E-7	9E-10	6E-6	6E-5
55	Cesium-137	D, all compounds	1E+2	2E+2	6E-8	2E-10	1E-6	1E-5
55	Cesium-138 ²	D, all compounds	2E+4 St wall (3E+4)	6E+4	2E-5	8E-8	- 4E-4	- 4E-3
56	Barium-126 ²	D, all compounds	6E+3	2E+4	6E-6	2E-8	8E-5	8E-4
56	Barium-128	D, all compounds	5E+2	2E+3	7E-7	2E-9	7E-6	7E-5
56	Barium-131m ²	D, all compounds	4E+5 St wall (5E+5)	1E+6	6E-4	2E-6	- 7E-3	- 7E-2
56	Barium-131	D, all compounds	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
56	Barium-133m	D, all compounds	2E+3 LLI wall (3E+3)	9E+3	4E-6	1E-8	- 4E-5	- 4E-4
56	Barium-133	D, all compounds	2E+3	7E+2	3E-7	9E-10	2E-5	2E-4
56	Barium-135m	D, all compounds	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
56	Barium-139 ²	D, all compounds	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
56	Barium-140	D, all compounds	5E+2 LLI wall (6E+2)	1E+3	6E-7	2E-9	- 8E-6	- 8E-5
56	Barium-141 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
56	Barium-142 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
57	Lanthanum-131 ²	D, all compounds except those given for W W, oxides and hydroxides	5E+4 -	1E+5 2E+5	5E-5 7E-5	2E-7 2E-7	6E-4 -	6E-3 -
57	Lanthanum-132	D, see ¹³¹ La W, see ¹³¹ La	3E+3 -	1E+4 1E+4	4E-6 5E-6	1E-8 2E-8	4E-5 -	4E-4 -
57	Lanthanum-135	D, see ¹³¹ La W, see ¹³¹ La	4E+4 -	1E+5 9E+4	4E-5 4E-5	1E-7 1E-7	5E-4 -	5E-3 -
57	Lanthanum-137	D, see ¹³¹ La W, see ¹³¹ La	1E+4 - -	6E+1 Liver (7E+1) 3E+2 Liver (3E+2)	3E-8 - 1E-7 -	- 1E-10 - 4E-10	2E-4 - - -	2E-3 - - -
57	Lanthanum-138	D, see ¹³¹ La W, see ¹³¹ La	9E+2 -	4E+0 1E+1	1E-9 6E-9	5E-12 2E-11	1E-5 -	1E-4 -
57	Lanthanum-140	D, see ¹³¹ La W, see ¹³¹ La	6E+2 -	1E+3 1E+3	6E-7 5E-7	2E-9 2E-9	9E-6 -	9E-5 -
57	Lanthanum-141	D, see ¹³¹ La W, see ¹³¹ La	4E+3 -	9E+3 1E+4	4E-6 5E-6	1E-8 2E-8	5E-5 -	5E-4 -
57	Lanthanum-142 ²	D, see ¹³¹ La W, see ¹³¹ La	8E+3 -	2E+4 3E+4	9E-6 1E-5	3E-8 5E-8	1E-4 -	1E-3 -
57	Lanthanum-143 ²	D, see ¹³¹ La W, see ¹³¹ La	4E+4 St wall (4E+4) -	1E+5 - 9E+4	4E-5 - 4E-5	1E-7 - 1E-7	- 5E-4 -	- 5E-3 -
58	Cerium-134	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	5E+2 LLI wall (6E+2) -	7E+2 - 7E+2	3E-7 - 3E-7	1E-9 - 9E-10	- 8E-6 -	- 8E-5 -
58	Cerium-135	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	2E+3 -	4E+3 4E+3	2E-6 1E-6	5E-9 5E-9	2E-5 -	2E-4 -
58	Cerium-137m	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	2E+3 LLI wall (2E+3) -	4E+3 - 4E+3	2E-6 - 2E-6	6E-9 - 5E-9	- 3E-5 -	- 3E-4 -
58	Cerium-137	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	5E+4 -	1E+5 1E+5	6E-5 5E-5	2E-7 2E-7	7E-4 -	7E-3 -
58	Cerium-139	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	5E+3 -	8E+2 7E+2	3E-7 3E-7	1E-9 9E-10	7E-5 -	7E-4 -
58	Cerium-141	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	2E+3 LLI wall (2E+3) -	7E+2 - 6E+2	3E-7 - 2E-7	1E-9 - 8E-10	- 3E-5 -	- 3E-4 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
58	Cerium-143	W, see ¹³⁴ Ce	1E+3	2E+3	8E-7	3E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹³⁴ Ce	-	2E+3	7E-7	2E-9	-	-
58	Cerium-144	W, see ¹³⁴ Ce	2E+2	3E+1	1E-8	4E-11	-	-
		LLI wall (3E+2)	-	-	-	-	3E-6	3E-5
		Y, see ¹³⁴ Ce	-	1E+1	6E-9	2E-11	-	-
59	Praseodymium-136 ²	W, all compounds except those given for Y	5E+4	2E+5	1E-4	3E-7	-	-
		St wall (7E+4)	-	-	-	-	1E-3	1E-2
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	9E-5	3E-7	-	-
59	Praseodymium-137 ²	W, see ¹³⁶ Pr	4E+4	2E+5	6E-5	2E-7	5E-4	5E-3
		Y, see ¹³⁶ Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-138m	W, see ¹³⁶ Pr	1E+4	5E+4	2E-5	8E-8	1E-4	1E-3
		Y, see ¹³⁶ Pr	-	4E+4	2E-5	6E-8	-	-
59	Praseodymium-139	W, see ¹³⁶ Pr	4E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see ¹³⁶ Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-142m ²	W, see ¹³⁶ Pr	8E+4	2E+5	7E-5	2E-7	1E-3	1E-2
		Y, see ¹³⁶ Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-142	W, see ¹³⁶ Pr	1E+3	2E+3	9E-7	3E-9	1E-5	1E-4
		Y, see ¹³⁶ Pr	-	2E+3	8E-7	3E-9	-	-
59	Praseodymium-143	W, see ¹³⁶ Pr	9E+2	8E+2	3E-7	1E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹³⁶ Pr	-	7E+2	3E-7	9E-10	-	-
59	Praseodymium-144 ²	W, see ¹³⁶ Pr	3E+4	1E+5	5E-5	2E-7	-	-
		St wall (4E+4)	-	-	-	-	6E-4	6E-3
		Y, see ¹³⁶ Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-145	W, see ¹³⁶ Pr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ¹³⁶ Pr	-	8E+3	3E-6	1E-8	-	-
59	Praseodymium-147 ²	W, see ¹³⁶ Pr	5E+4	2E+5	8E-5	3E-7	-	-
		St wall (8E+4)	-	-	-	-	1E-3	1E-2
		Y, see ¹³⁶ Pr	-	2E+5	8E-5	3E-7	-	-
60	Neodymium-136 ²	W, all compounds except those given for Y	1E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	5E+4	2E-5	8E-8	-	-
60	Neodymium-138	W, see ¹³⁶ Nd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		Y, see ¹³⁶ Nd	-	5E+3	2E-6	7E-9	-	-
60	Neodymium-139m	W, see ¹³⁶ Nd	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		Y, see ¹³⁶ Nd	-	1E+4	6E-6	2E-8	-	-
60	Neodymium-139 ²	W, see ¹³⁶ Nd	9E+4	3E+5	1E-4	5E-7	1E-3	1E-2
		Y, see ¹³⁶ Nd	-	3E+5	1E-4	4E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
60	Neodymium-141	W, see ^{136}Nd	2E+5	7E+5	3E-4	1E-6	2E-3	2E-2
		Y, see ^{136}Nd	-	6E+5	3E-4	9E-7	-	-
60	Neodymium-147	W, see ^{136}Nd	1E+3	9E+2	4E-7	1E-9	-	-
		Y, see ^{136}Nd	LLI wall (1E+3)	-	-	-	2E-5	2E-4
60	Neodymium-149 ²	W, see ^{136}Nd	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
		Y, see ^{136}Nd	-	2E+4	1E-5	3E-8	-	-
60	Neodymium-151 ²	W, see ^{136}Nd	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		Y, see ^{136}Nd	-	2E+5	8E-5	3E-7	-	-
61	Promethium-141 ²	W, all compounds except those given for Y	5E+4	2E+5	8E-5	3E-7	-	-
		Y, oxides, hydroxides, carbides, and fluorides	St wall (6E+4)	-	-	-	8E-4	8E-3
61	Promethium-143	W, see ^{141}Pm	5E+3	6E+2	2E-7	8E-10	7E-5	7E-4
		Y, see ^{141}Pm	-	7E+2	3E-7	1E-9	-	-
61	Promethium-144	W, see ^{141}Pm	1E+3	1E+2	5E-8	2E-10	2E-5	2E-4
		Y, see ^{141}Pm	-	1E+2	5E-8	2E-10	-	-
61	Promethium-145	W, see ^{141}Pm	1E+4	2E+2	7E-8	-	1E-4	1E-3
		Y, see ^{141}Pm	-	Bone surf (2E+2)	-	3E-10	-	-
61	Promethium-146	W, see ^{141}Pm	2E+3	5E+1	2E-8	7E-11	2E-5	2E-4
		Y, see ^{141}Pm	-	4E+1	2E-8	6E-11	-	-
61	Promethium-147	W, see ^{141}Pm	4E+3	1E+2	5E-8	-	-	-
		Y, see ^{141}Pm	LLI wall (5E+3)	Bone surf (2E+2)	-	3E-10	7E-5	7E-4
61	Promethium-148m	W, see ^{141}Pm	7E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		Y, see ^{141}Pm	-	3E+2	1E-7	5E-10	-	-
61	Promethium-148	W, see ^{141}Pm	4E+2	5E+2	2E-7	8E-10	-	-
		Y, see ^{141}Pm	LLI wall (5E+2)	-	-	-	7E-6	7E-5
61	Promethium-149	W, see ^{141}Pm	1E+3	2E+3	8E-7	3E-9	-	-
		Y, see ^{141}Pm	LLI wall (1E+3)	-	-	-	2E-5	2E-4
61	Promethium-150	W, see ^{141}Pm	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ^{141}Pm	-	2E+4	7E-6	2E-8	-	-
61	Promethium-151	W, see ^{141}Pm	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ^{141}Pm	-	3E+3	1E-6	4E-9	-	-
62	Samarium-141m ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
62	Samarium-141 ²	W, all compounds	5E+4 St wall (6E+4)	2E+5	8E-5	2E-7	-	8E-3
62	Samarium-142 ²	W, all compounds	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
62	Samarium-145	W, all compounds	6E+3	5E+2	2E-7	7E-10	8E-5	8E-4
62	Samarium-146	W, all compounds	1E+1 Bone surf (3E+1)	4E-2 Bone surf (6E-2)	1E-11	-	-	-
						9E-14	3E-7	3E-6
62	Samarium-147	W, all compounds	2E+1 Bone surf (3E+1)	4E-2 Bone surf (7E-2)	2E-11	-	-	-
						1E-13	4E-7	4E-6
62	Samarium-151	W, all compounds	1E+4 LLI wall (1E+4)	1E+2 Bone surf (2E+2)	4E-8	-	-	-
						2E-10	2E-4	2E-3
62	Samarium-153	W, all compounds	2E+3 LLI wall (2E+3)	3E+3	1E-6	4E-9	-	-
							3E-5	3E-4
62	Samarium-155 ²	W, all compounds	6E+4 St wall (8E+4)	2E+5	9E-5	3E-7	-	-
							1E-3	1E-2
62	Samarium-156	W, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
63	Europium-145	W, all compounds	2E+3	2E+3	8E-7	3E-9	2E-5	2E-4
63	Europium-146	W, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
63	Europium-147	W, all compounds	3E+3	2E+3	7E-7	2E-9	4E-5	4E-4
63	Europium-148	W, all compounds	1E+3	4E+2	1E-7	5E-10	1E-5	1E-4
63	Europium-149	W, all compounds	1E+4	3E+3	1E-6	4E-9	2E-4	2E-3
63	Europium-150 (12.62h)	W, all compounds	3E+3	8E+3	4E-6	1E-8	4E-5	4E-4
63	Europium-150 (34.2 y)	W, all compounds	8E+2	2E+1	8E-9	3E-11	1E-5	1E-4
63	Europium-152m	W, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
63	Europium-152	W, all compounds	8E+2	2E+1	1E-8	3E-11	1E-5	1E-4
63	Europium-154	W, all compounds	5E+2	2E+1	8E-9	3E-11	7E-6	7E-5
63	Europium-155	W, all compounds	4E+3	9E+1 Bone surf (1E+2)	4E-8	-	5E-5	5E-4
			-			2E-10	-	-
63	Europium-156	W, all compounds	6E+2	5E+2	2E-7	6E-10	8E-6	8E-5
63	Europium-157	W, all compounds	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
63	Europium-158 ²	W, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
64	Gadolinium-145 ²	D, all compounds except those given for W	5E+4 St wall (5E+4)	2E+5	6E-5	2E-7	-	-
		W, oxides, hydroxides, and fluo- rides	-	2E+5	7E-5	2E-7	6E-4	6E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration $\mu\text{Ci/ml}$
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
	ALI μCi	DAC $\mu\text{Ci/ml}$						
64	Gadolinium-146	D, see ^{145}Gd W, see ^{145}Gd	1E+3 -	1E+2 3E+2	5E-8 1E-7	2E-10 4E-10	2E-5 -	2E-4 -
64	Gadolinium-147	D, see ^{145}Gd W, see ^{145}Gd	2E+3 -	4E+3 4E+3	2E-6 1E-6	6E-9 5E-9	3E-5 -	3E-4 -
64	Gadolinium-148	D, see ^{145}Gd W, see ^{145}Gd	1E+1 Bone surf (2E+1) - -	8E+3 Bone surf (2E+2) 3E-2 Bone surf (6E-2)	3E-12 - 1E-11 -	- 2E-14 - 8E-14	- 3E-7 - -	- 3E-6 - -
64	Gadolinium-149	D, see ^{145}Gd W, see ^{145}Gd	3E+3 -	2E+3 2E+3	9E-7 1E-6	3E-9 3E-9	4E-5 -	4E-4 -
64	Gadolinium-151	D, see ^{145}Gd W, see ^{145}Gd	6E+3 - -	4E+2 Bone surf (6E+2) 1E+3	2E-7 - 5E-7	- 9E-10 2E-9	9E-5 - -	9E-4 - -
64	Gadolinium-152	D, see ^{145}Gd W, see ^{145}Gd	2E+1 Bone surf (3E+1) - -	1E-2 Bone surf (2E-2) 4E-2 Bone surf (8E-2)	4E-12 - 2E-11 -	- 3E-14 - 1E-13	- 4E-7 - -	- 4E-6 - -
64	Gadolinium-153	D, see ^{145}Gd W, see ^{145}Gd	5E+3 - -	1E+2 Bone surf (2E+2) 6E+2	6E-8 - 2E-7	- 3E-10 8E-10	6E-5 - -	6E-4 - -
64	Gadolinium-159	D, see ^{145}Gd W, see ^{145}Gd	3E+3 -	8E+3 6E+3	3E-6 2E-6	1E-8 8E-9	4E-5 -	4E-4 -
65	Terbium-147 ²	W, all compounds	9E+3	3E+4	1E-5	5E-8	1E-4	1E-3
65	Terbium-149	W, all compounds	5E+3	7E+2	3E-7	1E-9	7E-5	7E-4
65	Terbium-150	W, all compounds	5E+3	2E+4	9E-6	3E-8	7E-5	7E-4
65	Terbium-151	W, all compounds	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
65	Terbium-153	W, all compounds	5E+3	7E+3	3E-6	1E-8	7E-5	7E-4
65	Terbium-154	W, all compounds	2E+3	4E+3	2E-6	6E-9	2E-5	2E-4
65	Terbium-155	W, all compounds	6E+3	8E+3	3E-6	1E-8	8E-5	8E-4
65	Terbium-156m (5.0 h)	W, all compounds	2E+4	3E+4	1E-5	4E-8	2E-4	2E-3
65	Terbium-156m (24.4 h)	W, all compounds	7E+3	8E+3	3E-6	1E-8	1E-4	1E-3
65	Terbium-156	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
65	Terbium-157	W, all compounds	5E+4 LLI wall (5E+4)	3E+2 Bone surf (6E+2)	1E-7 - -	- 8E-10 -	- 7E-4 -	- 7E-3 -
65	Terbium-158	W, all compounds	1E+3	2E+1	8E-9	3E-11	2E-5	2E-4

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
65	Terbium-160	W, all compounds	8E+2	ALI μCi	DAC μCi/ml	3E-10	1E-5	1E-4
65	Terbium-161	W, all compounds	2E+3 LLI wall (2E+3)	2E+3	7E-7	2E-9	- 3E-5	- 3E-4
66	Dysprosium-155	W, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
66	Dysprosium-157	W, all compounds	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
66	Dysprosium-159	W, all compounds	1E+4	2E+3	1E-6	3E-9	2E-4	2E-3
66	Dysprosium-165	W, all compounds	1E+4	5E+4	2E-5	6E-8	2E-4	2E-3
66	Dysprosium-166	W, all compounds	6E+2 LLI wall (8E+2)	7E+2	3E-7	1E-9	- 1E-5	- 1E-4
67	Holmium-155 ²	W, all compounds	4E+4	2E+5	6E-5	2E-7	6E-4	6E-3
67	Holmium-157 ²	W, all compounds	3E+5	1E+6	6E-4	2E-6	4E-3	4E-2
67	Holmium-159 ²	W, all compounds	2E+5	1E+6	4E-4	1E-6	3E-3	3E-2
67	Holmium-161	W, all compounds	1E+5	4E+5	2E-4	6E-7	1E-3	1E-2
67	Holmium-162m ²	W, all compounds	5E+4	3E+5	1E-4	4E-7	7E-4	7E-3
67	Holmium-162 ²	W, all compounds	5E+5 St wall (8E+5)	2E+6	1E-3	3E-6	- 1E-2	- 1E-1
67	Holmium-164m ²	W, all compounds	1E+5	3E+5	1E-4	4E-7	1E-3	1E-2
67	Holmium-164 ²	W, all compounds	2E+5 St wall (2E+5)	6E+5	3E-4	9E-7	- 3E-3	- 3E-2
67	Holmium-166m	W, all compounds	6E+2	7E+0	3E-9	9E-12	9E-6	9E-5
67	Holmium-166	W, all compounds	9E+2 LLI wall (9E+2)	2E+3	7E-7	2E-9	- 1E-5	- 1E-4
67	Holmium-167	W, all compounds	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
68	Erbium-161	W, all compounds	2E+4	6E+4	3E-5	9E-8	2E-4	2E-3
68	Erbium-165	W, all compounds	6E+4	2E+5	8E-5	3E-7	9E-4	9E-3
68	Erbium-169	W, all compounds	3E+3 LLI wall (4E+3)	3E+3	1E-6	4E-9	- 5E-5	- 5E-4
68	Erbium-171	W, all compounds	4E+3	1E+4	4E-6	1E-8	5E-5	5E-4
68	Erbium-172	W, all compounds	1E+3 LLI wall (E+3)	1E+3	6E-7	2E-9	- 2E-5	- 2E-4
69	Thulium-162 ²	W, all compounds	7E+4 St wall (7E+4)	3E+5	1E-4	4E-7	- 1E-3	- 1E-2

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
69	Thulium-166	W, all compounds	4E+3	1E+4	6E-6	2E-8	6E-5	6E-4
69	Thulium-167	W, all compounds	2E+3 LLI wall (2E+3)	2E+3	8E-7	3E-9	- 3E-5	- 3E-4
69	Thulium-170	W, all compounds	8E+2 LLI wall (1E+3)	2E+2	9E-8	3E-10	- 1E-5	- 1E-4
69	Thulium-171	W, all compounds	1E+4 LLI wall (1E+4)	3E+2 Bone surf (6E+2)	1E-7	- 8E-10	- 2E-4	- 2E-3
69	Thulium-172	W, all compounds	7E+2 LLI wall (8E+2)	1E+3	5E-7	2E-9	- 1E-5	- 1E-4
69	Thulium-173	W, all compounds	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
69	Thulium-175 ²	W, all compounds	7E+4 St wall (9E+4)	3E+5	1E-4	4E-7	- 1E-3	- 1E-2
70	Ytterbium-162 ²	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	7E+4	3E+5	1E-4	4E-7	1E-3	1E-2
			-	3E+5	1E-4	4E-7	-	-
70	Ytterbium-166	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+3	2E+3	8E-7	3E-9	2E-5	2E-4
			-	2E+3	8E-7	3E-9	-	-
70	Ytterbium-167 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	3E+5	8E+5	3E-4	1E-6	4E-3	4E-2
			-	7E+5	3E-4	1E-6	-	-
70	Ytterbium-169	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4
			-	7E+2	3E-7	1E-9	-	-
70	Ytterbium-175	W, see ¹⁶² Yb	3E+3	4E+3	1E-6	5E-9	-	-
		LLI wall (3E+3)	-	-	-	-	4E-5	4E-4
		Y, see ¹⁶² Yb	-	3E+3	1E-6	5E-9	-	-
70	Ytterbium-177 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+4	5E+4	2E-5	7E-8	2E-4	2E-3
			-	5E+4	2E-5	6E-8	-	-
70	Ytterbium-178 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
			-	4E+4	2E-5	5E-8	-	-
71	Lutetium-169	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	3E+3	4E+3	2E-6	6E-9	3E-5	3E-4
			-	4E+3	2E-6	6E-9	-	-
71	Lutetium-170	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3	2E+3	9E-7	3E-9	2E-5	2E-4
			-	2E+3	8E-7	3E-9	-	-
71	Lutetium-171	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	2E+3	2E+3	8E-7	3E-9	3E-5	3E-4
			-	2E+3	8E-7	3E-9	-	-
71	Lutetium-172	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
			-	1E+3	5E-7	2E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
71	Lutetium-173	W, see ¹⁶⁹ Lu	5E+3	3E+2	1E-7	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (5E+2) 3E+2	-	6E-10 4E-10	-	-
71	Lutetium-174m	W, see ¹⁶⁹ Lu	2E+3	2E+2	1E-7	-	-	-
		Y, see ¹⁶⁹ Lu	LLI wall (3E+3)	Bone surf (3E+2) 2E+2	-	5E-10 3E-10	4E-5	4E-4
71	Lutetium-174	W, see ¹⁶⁹ Lu	5E+3	1E+2	5E-8	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (2E+2) 2E+2	-	3E-10 2E-10	-	-
71	Lutetium-176m	W, see ¹⁶⁹ Lu	8E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		Y, see ¹⁶⁹ Lu	-	2E+4	9E-6	3E-8	-	-
71	Lutetium-176	W, see ¹⁶⁹ Lu	7E+2	5E+0	2E-9	-	1E-5	1E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (1E+1) 8E+0	-	2E-11 1E-11	-	-
71	Lutetium-177m	W, see ¹⁶⁹ Lu	7E+2	1E+2	5E-8	-	1E-5	1E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (1E+2) 8E+1	-	2E-10 1E-10	-	-
71	Lutetium-177	W, see ¹⁶⁹ Lu	2E+3	2E+3	9E-7	3E-9	-	-
		Y, see ¹⁶⁹ Lu	LLI wall (3E+3)	-	-	-	4E-5	4E-4
71	Lutetium-178m ²	W, see ¹⁶⁹ Lu	5E+4	2E+5	8E-5	3E-7	-	-
		Y, see ¹⁶⁹ Lu	St. wall (6E+4)	-	-	-	8E-4	8E-3
71	Lutetium-178 ²	W, see ¹⁶⁹ Lu	4E+4	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁶⁹ Lu	St wall (4E+4)	-	-	-	6E-4	6E-3
71	Lutetium-179	W, see ¹⁶⁹ Lu	6E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see ¹⁶⁹ Lu	-	2E+4	6E-6	3E-8	-	-
72	Hafnium-170	D, all compounds except those given for W W, oxides, hydroxides, carbides, and nitrates	3E+3	6E+3	2E-6	8E-9	4E-5	4E-4
			-	5E+3	2E-6	6E-9	-	-
72	Hafnium-172	D, see ¹⁷⁰ Hf	1E+3	9E+0	4E-9	-	2E-5	2E-4
		W, see ¹⁷⁰ Hf	-	Bone surf (2E+1) 4E+1	-	3E-11	-	-
			-	Bone surf (6E+1)	-	8E-11	-	-
72	Hafnium-173	D, see ¹⁷⁰ Hf	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ¹⁷⁰ Hf	-	1E+4	5E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
	ALI μCi	DAC μCi/ml						
72	Hafnium-175	D, see ¹⁷⁰ Hf	3E+3	9E+2	4E-7	-	4E-5	4E-4
				Bone surf (1E+3)	-	1E-9	-	-
		W, see ¹⁷⁰ Hf	-	1E+3	5E-7	2E-9	-	-
72	Hafnium-177m ²	D, see ¹⁷⁰ Hf	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		W, see ¹⁷⁰ Hf	-	9E+4	4E-5	1E-7	-	-
72	Hafnium-178m	D, see ¹⁷⁰ Hf	3E+2	1E+0	5E-10	-	3E-6	3E-5
				Bone surf (2E+0)	-	3E-12	-	-
		W, see ¹⁷⁰ Hf	-	5E+0	2E-9	-	-	-
				Bone surf (9E+0)	-	1E-11	-	-
72	Hafnium-179m	D, see ¹⁷⁰ Hf	1E+3	3E+2	1E-7	-	1E-5	1E-4
				Bone surf (6E+2)	-	8E-10	-	-
		W, see ¹⁷⁰ Hf	-	6E+2	3E-7	8E-10	-	-
72	Hafnium-180m	D, see ¹⁷⁰ Hf	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ¹⁷⁰ Hf	-	3E+4	1E-5	4E-8	-	-
72	Hafnium-181	D, see ¹⁷⁰ Hf	1E+3	2E+2	7E-8	-	2E-5	2E-4
				Bone surf (4E+2)	-	6E-10	-	-
		W, see ¹⁷⁰ Hf	-	4E+2	2E-7	6E-10	-	-
72	Hafnium-182m ²	D, see ¹⁷⁰ Hf	4E+4	9E+4	4E-5	1E-7	5E-4	5E-3
		W, see ¹⁷⁰ Hf	-	1E+5	6E-5	2E-7	-	-
72	Hafnium-182	D, see ¹⁷⁰ Hf	2E+2	8E-1	3E-10	-	-	-
				Bone surf (4E+2)	-	2E-12	5E-6	5E-5
		W, see ¹⁷⁰ Hf	-	3E+0	1E-9	-	-	-
				Bone surf (7E+0)	-	1E-11	-	-
72	Hafnium-183 ²	D, see ¹⁷⁰ Hf	2E+4	5E+4	2E-5	6E-8	3E-4	3E-3
		W, see ¹⁷⁰ Hf	-	6E+4	2E-5	8E-8	-	-
72	Hafnium-184	D, see ¹⁷⁰ Hf	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ¹⁷⁰ Hf	-	6E+3	3E-6	9E-9	-	-
73	Tantalum-172 ²	W, all compounds except those given for Y Y, elemental Ta, oxides, hydroxides, halides, carbides, nitrates, and nitrides	4E+4	1E+5	5E-5	2E-7	5E-4	5E-3
				1E+5	4E-5	1E-7	-	-
73	Tantalum-173	W, see ¹⁷² Ta Y, see ¹⁷² Ta	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
			-	2E+4	7E-6	2E-8	-	-
73	Tantalum-174 ²	W, see ¹⁷² Ta Y, see ¹⁷² Ta	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
			-	9E+4	4E-5	1E-7	-	-
73	Tantalum-175	W, see ¹⁷² Ta Y, see ¹⁷² Ta	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
			-	1E+4	6E-6	2E-8	-	-
73	Tantalum-176	W, see ¹⁷² Ta Y, see ¹⁷² Ta	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
			-	1E+4	5E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
			ALI μCi	DAC μCi/ml				
73	Tantalum-177	W, see ¹⁷² Ta Y, see ¹⁷² Ta	1E+4 -	2E+4 2E+4	8E-6 7E-6	3E-8 2E-8	2E-4 -	2E-3 -
73	Tantalum-178	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+4 -	9E+4 7E+4	4E-5 3E-5	1E-7 1E-7	2E-4 -	2E-3 -
73	Tantalum-179	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+4 -	5E+3 9E+2	2E-6 4E-7	8E-9 1E-9	3E-4 -	3E-3 -
73	Tantalum-180m	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+4 -	7E+4 6E+4	3E-5 2E-5	9E-8 8E-8	3E-4 -	3E-3 -
73	Tantalum-180	W, see ¹⁷² Ta Y, see ¹⁷² Ta	1E+3 -	4E+2 2E+1	2E-7 1E-8	6E-10 3E-11	2E-5 -	2E-4 -
73	Tantalum-182m ²	W, see ¹⁷² Ta	2E+5 St wall (2E+5)	5E+5 -	2E-4 -	8E-7 -	- 3E-3	- 3E-2
		Y, see ¹⁷² Ta	-	4E+5	2E-4	6E-7	-	-
73	Tantalum-182	W, see ¹⁷² Ta Y, see ¹⁷² Ta	8E+2 -	3E+2 1E+2	1E-7 6E-8	5E-10 2E-10	1E-5 -	1E-4 -
73	Tantalum-183	W, see ¹⁷² Ta	9E+2 LLI wall (1E+3)	1E+3 -	5E-7 -	2E-9 -	- 2E-5	- 2E-4
		Y, see ¹⁷² Ta	-	1E+3	4E-7	1E-9	-	-
73	Tantalum-184	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+3 -	5E+3 5E+3	2E-6 2E-6	8E-9 7E-9	3E-5 -	3E-4 -
73	Tantalum-185 ²	W, see ¹⁷² Ta Y, see ¹⁷² Ta	3E+4 -	7E+4 6E+4	3E-5 3E-5	1E-7 9E-8	4E-4 -	4E-3 -
73	Tantalum-186 ²	W, see ¹⁷² Ta	5E+4 St wall (7E+4)	2E+5 -	1E-4 -	3E-7 -	- 1E-3	- 1E-2
		Y, see ¹⁷² Ta	-	2E+5	9E-5	3E-7	-	-
74	Tungsten-176	D, all compounds	1E+4	5E+4	2E-5	7E-8	1E-4	1E-3
74	Tungsten-177	D, all compounds	2E+4	9E+4	4E-5	1E-7	3E-4	3E-3
74	Tungsten-178	D, all compounds	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
74	Tungsten-179 ²	D, all compounds	5E+5	2E+6	7E-4	2E-6	7E-3	7E-2
74	Tungsten-181	D, all compounds	2E+4	3E+4	1E-5	5E-8	2E-4	2E-3
74	Tungsten-185	D, all compounds	2E+3 LLI wall (3E+3)	7E+3 -	3E-6 -	9E-9 -	- 4E-5	- 4E-4
74	Tungsten-187	D, all compounds	2E+3	9E+3	4E-6	1E-8	3E-5	3E-4
74	Tungsten-188	D, all compounds	4E+2 LLI wall (5E+2)	1E+3 -	5E-7 -	2E-9 -	- 7E-6	- 7E-5
75	Rhenium-177 ²	D, all compounds except those given for W	9E+4 St wall (1E+5)	3E+5 -	1E-4 -	4E-7 -	- 2E-3	- 2E-2

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
		W, oxides, hydroxides, and nitrates	-	4E+5	1E-4	5E-7	-	-
75	Rhenium-178 ²	D, see ¹⁷⁷ Re	7E+4	3E+5	1E-4	4E-7	-	-
		St wall (1E+5)	-	-	-	-	1E-3	1E-2
		W, see ¹⁷⁷ Re	-	3E+5	1E-4	4E-7	-	-
75	Rhenium-181	D, see ¹⁷⁷ Re	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
		W, see ¹⁷⁷ Re	-	9E+3	4E-6	1E-8	-	-
75	Rhenium-182 (12.7 h)	D, see ¹⁷⁷ Re	7E+3	1E+4	5E-6	2E-8	9E-5	9E-4
		W, see ¹⁷⁷ Re	-	2E+4	6E-6	2E-8	-	-
75	Rhenium-182 (64.0 h)	D, see ¹⁷⁷ Re	1E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+3	9E-7	3E-9	-	-
75	Rhenium-184m	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	4E+2	2E-7	6E-10	-	-
75	Rhenium-184	D, see ¹⁷⁷ Re	2E+3	4E+3	1E-6	5E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	1E+3	6E-7	2E-9	-	-
75	Rhenium-186m	D, see ¹⁷⁷ Re	1E+3	2E+3	7E-7	-	-	-
		St wall (2E+3)	-	St wall (2E+3)	-	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+2	6E-8	2E-10	-	-
75	Rhenium-186	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	2E+3	7E-7	2E-9	-	-
75	Rhenium-187	D, see ¹⁷⁷ Re	6E+5	8E+5	4E-4	-	8E-3	8E-2
		St wall (9E+5)	-	St wall (9E+5)	-	1E-6	-	-
		W, see ¹⁷⁷ Re	-	1E+5	4E-5	1E-7	-	-
75	Rhenium-188m ²	D, see ¹⁷⁷ Re	8E+4	1E+5	6E-5	2E-7	1E-3	1E-2
		W, see ¹⁷⁷ Re	-	1E+5	6E-5	2E-7	-	-
75	Rhenium-188	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	3E+3	1E-6	4E-9	-	-
75	Rhenium-189	D, see ¹⁷⁷ Re	3E+3	5E+3	2E-6	7E-9	4E-5	4E-4
		W, see ¹⁷⁷ Re	-	4E+3	2E-6	6E-9	-	-
76	Osmium-180 ²	D, all compounds except those given for W and Y	1E+5	4E+5	2E-4	5E-7	1E-3	1E-2
		W, halides and nitrates	-	5E+5	2E-4	7E-7	-	-
		Y, oxides and hydroxides	-	5E+5	2E-4	6E-7	-	-
76	Osmium-181 ²	D, see ¹⁸⁰ Os	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	5E+4	2E-5	6E-8	-	-
		Y, see ¹⁸⁰ Os	-	4E+4	2E-5	6E-8	-	-
76	Osmium-182	D, see ¹⁸⁰ Os	2E+3	6E+3	2E-6	8E-9	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
76	Osmium-185	D, see ¹⁸⁰ Os	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-
		Y, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
76	Osmium-189m	D, see ¹⁸⁰ Os	8E+4	2E+5	1E-4	3E-7	1E-3	1E-2
		W, see ¹⁸⁰ Os	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁸⁰ Os	-	2E+5	7E-5	2E-7	-	-
76	Osmium-191m	D, see ¹⁸⁰ Os	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	2E+4	8E-6	3E-8	-	-
		Y, see ¹⁸⁰ Os	-	2E+4	7E-6	2E-8	-	-
76	Osmium-191	D, see ¹⁸⁰ Os	2E+3	2E+3	9E-7	3E-9	-	-
		LLI wall (3E+3)	-	-	-	-	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	2E+3	7E-7	2E-9	-	-
76	Osmium-193	Y, see ¹⁸⁰ Os	-	1E+3	6E-7	2E-9	-	-
		D, see ¹⁸⁰ Os	2E+3	5E+3	2E-6	6E-9	-	-
		LLI wall (2E+3)	-	-	-	-	2E-5	2E-4
76	Osmium-194	W, see ¹⁸⁰ Os	-	3E+3	1E-6	4E-9	-	-
		Y, see ¹⁸⁰ Os	-	3E+3	1E-6	4E-9	-	-
		D, see ¹⁸⁰ Os	4E+2	4E+1	2E-8	6E-11	-	-
76	Osmium-194	LLI wall (6E+2)	-	-	-	-	8E-6	8E-5
		W, see ¹⁸⁰ Os	-	6E+1	2E-8	8E-11	-	-
		Y, see ¹⁸⁰ Os	-	8E+0	3E-9	1E-11	-	-
77	Iridium-182 ²	D, all compounds except those given for W and Y	4E+4	1E+5	6E-5	2E-7	-	-
		St wall (4E+4)	-	-	-	-	6E-4	6E-3
		W, halides, nitrates, and metallic iridium	-	2E+5	6E-5	2E-7	-	-
77	Iridium-184	Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
		D, see ¹⁸² Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	5E-8	-	-
77	Iridium-185	Y, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		D, see ¹⁸² Ir	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ¹⁸² Ir	-	1E+4	5E-6	2E-8	-	-
77	Iridium-186	Y, see ¹⁸² Ir	-	1E+4	4E-6	1E-8	-	-
		D, see ¹⁸² Ir	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ¹⁸² Ir	-	6E+3	3E-6	9E-9	-	-
77	Iridium-187	Y, see ¹⁸² Ir	-	6E+3	2E-6	8E-9	-	-
		D, see ¹⁸² Ir	1E+4	3E+4	1E-5	5E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
77	Iridium-188	Y, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		D, see ¹⁸² Ir	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		W, see ¹⁸² Ir	-	4E+3	1E-6	5E-9	-	-
77	Iridium-189	Y, see ¹⁸² Ir	-	3E+3	1E-6	5E-9	-	-
		D, see ¹⁸² Ir	5E+3	5E+3	2E-6	7E-9	-	-
		LLI wall (5E+3)	-	-	-	-	7E-5	7E-4
77	Iridium-190m ²	W, see ¹⁸² Ir	-	4E+3	2E-6	5E-9	-	-
		Y, see ¹⁸² Ir	-	4E+3	1E-6	5E-9	-	-
		D, see ¹⁸² Ir	2E+5	2E+5	8E-5	3E-7	2E-3	2E-2
77	Iridium-190m ²	W, see ¹⁸² Ir	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁸² Ir	-	2E+5	8E-5	3E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	DAC μCi/ml				
77	Iridium-190	D, see ¹⁸² Ir	1E+3	9E+2	4E-7	1E-9	1E-5	1E-4
		W, see ¹⁸² Ir	-	1E+3	4E-7	1E-9	-	-
		Y, see ¹⁸² Ir	-	9E+2	4E-7	1E-9	-	-
77	Iridium-192m	D, see ¹⁸² Ir	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
		W, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
		Y, see ¹⁸² Ir	-	2E+1	6E-9	2E-11	-	-
77	Iridium-192	D, see ¹⁸² Ir	9E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		W, see ¹⁸² Ir	-	4E+2	2E-7	6E-10	-	-
		Y, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
77	Iridium-194m	D, see ¹⁸² Ir	6E+2	9E+1	4E-8	1E-10	9E-6	9E-5
		W, see ¹⁸² Ir	-	2E+2	7E-8	2E-10	-	-
		Y, see ¹⁸² Ir	-	1E+2	4E-8	1E-10	-	-
77	Iridium-194	D, see ¹⁸² Ir	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see ¹⁸² Ir	-	2E+3	9E-7	3E-9	-	-
		Y, see ¹⁸² Ir	-	2E+3	8E-7	3E-9	-	-
77	Iridium-195m	D, see ¹⁸² Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		Y, see ¹⁸² Ir	-	2E+4	9E-6	3E-8	-	-
77	Iridium-195	D, see ¹⁸² Ir	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸² Ir	-	5E+4	2E-5	7E-8	-	-
		Y, see ¹⁸² Ir	-	4E+4	2E-5	6E-8	-	-
78	Platinum-186	D, all compounds	1E+4	4E+4	2E-5	5E-8	2E-4	2E-3
78	Platinum-188	D, all compounds	2E+3	2E+3	7E-7	2E-9	2E-5	2E-4
78	Platinum-189	D, all compounds	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
78	Platinum-191	D, all compounds	4E+3	8E+3	4E-6	1E-8	5E-5	5E-4
78	Platinum-193m	D, all compounds	3E+3	6E+3	3E-6	8E-9	-	-
78	Platinum-193	D, all compounds	LLI wall (3E+4) 4E+4	2E+4	1E-5	3E-8	4E-5	4E-4
78	Platinum-195m	D, all compounds	LLI wall (5E+4) 2E+3	-	-	-	6E-4	6E-3
78	Platinum-195m	D, all compounds	2E+3	4E+3	2E-6	6E-9	-	-
78	Platinum-197m ²	D, all compounds	LLI wall (2E+3)	-	-	-	3E-5	3E-4
78	Platinum-197m ²	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
78	Platinum-199 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
79	Gold-193	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, halides and nitrates	-	2E+4	9E-6	3E-8	-	-
		Y, oxides and hydroxides	-	2E+4	8E-6	3E-8	-	-
79	Gold-194	D, see ¹⁹³ Au	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ¹⁹³ Au	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁹³ Au	-	5E+3	2E-6	7E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
		ALI μCi	DAC $\mu\text{Ci/ml}$			$\mu\text{Ci/ml}$		
79	Gold-195	D, see ^{193}Au	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ^{193}Au	-	1E+3	6E-7	2E-9	-	-
		Y, see ^{193}Au	-	4E+2	2E-7	6E-10	-	-
79	Gold-198m	D, see ^{193}Au	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see ^{193}Au	-	1E+3	5E-7	2E-9	-	-
		Y, see ^{193}Au	-	1E+3	5E-7	2E-9	-	-
79	Gold-198	D, see ^{193}Au	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see ^{193}Au	-	2E+3	8E-7	3E-9	-	-
		Y, see ^{193}Au	-	2E+3	7E-7	2E-9	-	-
79	Gold-199	D, see ^{193}Au	3E+3	9E+3	4E-6	1E-8	-	-
		LLI wall (3E+3)	-	-	-	-	4E-5	4E-4
		W, see ^{193}Au	-	4E+3	2E-6	6E-9	-	-
79	Gold-200m	D, see ^{193}Au	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ^{193}Au	-	3E+3	1E-6	4E-9	-	-
		Y, see ^{193}Au	-	2E+4	1E-6	3E-9	-	-
79	Gold-200 ²	D, see ^{193}Au	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ^{193}Au	-	8E+4	3E-5	1E-7	-	-
		Y, see ^{193}Au	-	7E+4	3E-5	1E-7	-	-
79	Gold-201 ²	D, see ^{193}Au	7E+4	2E+5	9E-5	3E-7	-	-
		St wall (9E+4)	-	-	-	-	1E-3	1E-2
		W, see ^{193}Au	-	2E+5	1E-4	3E-7	-	-
80	Mercury-193m	Y, see ^{193}Au	-	2E+5	9E-5	3E-7	-	-
		Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
80	Mercury-193	D, sulfates	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, oxides, hydroxides, halides, nitrates, and sulfides	-	8E+3	3E-6	1E-8	-	-
		Vapor	-	3E+4	1E-5	4E-8	-	-
80	Mercury-193	Organic D	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		D, see $^{193\text{m}}\text{Hg}$	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see $^{193\text{m}}\text{Hg}$	-	4E+4	2E-5	6E-8	-	-
80	Mercury-194	Vapor	-	3E+1	1E-8	4E-11	-	-
		Organic D	2E+1	3E+1	1E-8	4E-11	2E-7	2E-6
		D, see $^{193\text{m}}\text{Hg}$	8E+2	4E+1	2E-8	6E-11	1E-5	1E-4
80	Mercury-194	W, see $^{193\text{m}}\text{Hg}$	-	1E+2	5E-8	2E-10	-	-
		Vapor	-	4E+3	2E-6	6E-9	-	-
		Organic D	3E+3	6E+3	3E-6	8E-9	4E-5	4E-4
80	Mercury-195m	D, see $^{193\text{m}}\text{Hg}$	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
		W, see $^{193\text{m}}\text{Hg}$	-	4E+3	2E-6	5E-9	-	-
		Vapor	-	3E+4	1E-5	4E-8	-	-
80	Mercury-195	Organic D	2E+4	5E+4	2E-5	6E-8	2E-4	2E-3
		D, see $^{193\text{m}}\text{Hg}$	1E+4	4E+4	1E-5	5E-8	2E-4	2E-3
		W, see $^{193\text{m}}\text{Hg}$	-	3E+4	1E-5	5E-8	-	-
80	Mercury-197m	Vapor	-	5E+3	2E-6	7E-9	-	-
		Organic D	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		D, see $^{193\text{m}}\text{Hg}$	3E+3	7E+3	3E-6	1E-8	4E-5	4E-4
80	Mercury-197m	W, see $^{193\text{m}}\text{Hg}$	-	5E+3	2E-6	7E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
80	Mercury-197	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	7E+3	1E+4	6E-6	2E-8	9E-5	9E-4
		D, see ^{193m} Hg	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{193m} Hg	-	9E+3	4E-6	1E-8	-	-
80	Mercury-199m ²	Vapor	-	8E+4	3E-5	1E-7	-	-
		Organic D	6E+4	2E+5	7E-5	2E-7	-	-
		St wall (1E+5)	-	-	-	-	1E-3	1E-2
		D, see ^{193m} Hg	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
		W, see ^{193m} Hg	-	2E+5	7E-5	2E-7	-	-
80	Mercury-203	Vapor	-	8E+2	4E-7	1E-9	-	-
		Organic D	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
		D, see ^{193m} Hg	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	1E+3	5E-7	2E-9	-	-
81	Thallium-194m ²	D, all compounds	5E+4	2E+5	6E-5	2E-7	-	-
		St wall (7E+4)	-	-	-	-	1E-3	1E-2
81	Thallium-194 ²	D, all compounds	3E+5	6E+5	2E-4	8E-7	-	-
		St wall (3E+5)	-	-	-	-	4E-3	4E-2
81	Thallium-195 ²	D, all compounds	6E+4	1E+5	5E-5	2E-7	9E-4	9E-3
81	Thallium-197	D, all compounds	7E+4	1E+5	5E-5	2E-7	1E-3	1E-2
81	Thallium-198m ²	D, all compounds	3E+4	5E+4	2E-5	8E-8	4E-4	4E-3
81	Thallium-198	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
81	Thallium-199	D, all compounds	6E+4	8E+4	4E-5	1E-7	9E-4	9E-3
81	Thallium-200	D, all compounds	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
81	Thallium-201	D, all compounds	2E+4	2E+4	9E-6	3E-8	2E-4	2E-3
81	Thallium-202	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
81	Thallium-204	D, all compounds	2E+3	2E+3	9E-7	3E-9	2E-5	2E-4
82	Lead-195m ²	D, all compounds	6E+4	2E+5	8E-5	3E-7	8E-4	8E-3
82	Lead-198	D, all compounds	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
82	Lead-199 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
82	Lead-200	D, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
82	Lead-201	D, all compounds	7E+3	2E+4	8E-6	3E-8	1E-4	1E-3
82	Lead-202m	D, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
82	Lead-202	D, all compounds	1E+2	5E+1	2E-8	7E-11	2E-6	2E-5
82	Lead-203	D, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
82	Lead-205	D, all compounds	4E+3	1E+3	6E-7	2E-9	5E-5	5E-4
82	Lead-209	D, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
82	Lead-210	D, all compounds	6E-1 Bone surf (1E+0)	2E-1 Bone surf (4E-1)	1E-10 -	- 6E-13	- 1E-8	- 1E-7
82	Lead-211 ²	D, all compounds	1E+4	6E+2	3E-7	9E-10	2E-4	2E-3
82	Lead-212	D, all compounds	8E+1 Bone surf (1E+2)	3E+1 -	1E-8 -	5E-11 -	- 2E-6	- 2E-5
82	Lead-214 ²	D, all compounds	9E+3	8E+2	3E-7	1E-9	1E-4	1E-3
83	Bismuth-200 ²	D, nitrates W, all other compounds	3E+4 -	8E+4 1E+5	4E-5 4E-5	1E-7 1E-7	4E-4 -	4E-3 -
83	Bismuth-201 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+4 -	3E+4 4E+4	1E-5 2E-5	4E-8 5E-8	2E-4 -	2E-3 -
83	Bismuth-202 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+4 -	4E+4 8E+4	2E-5 3E-5	6E-8 1E-7	2E-4 -	2E-3 -
83	Bismuth-203	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	2E+3 -	7E+3 6E+3	3E-6 3E-6	9E-9 9E-9	3E-5 -	3E-4 -
83	Bismuth-205	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+3 -	3E+3 1E+3	1E-6 5E-7	3E-9 2E-9	2E-5 -	2E-4 -
83	Bismuth-206	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	6E+2 -	1E+3 9E+2	6E-7 4E-7	2E-9 1E-9	9E-6 -	9E-5 -
83	Bismuth-207	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+3 -	2E+3 4E+2	7E-7 1E-7	2E-9 5E-10	1E-5 -	1E-4 -
83	Bismuth-210m	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	4E+1 Kidneys (6E+1) -	5E+0 Kidneys (6E+0) 7E-1	2E-9 - 3E-10	- 9E-12 9E-13	- 8E-7 -	- 8E-6 -
83	Bismuth-210	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	8E+2 - -	2E+2 Kidneys (4E+2) 3E+1	1E-7 - 1E-8	- 5E-10 4E-11	1E-5 - -	1E-4 - -
83	Bismuth-212 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	5E+3 -	2E+2 3E+2	1E-7 1E-7	3E-10 4E-10	7E-5 -	7E-4 -
83	Bismuth-213 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	7E+3 -	3E+2 4E+2	1E-7 1E-7	4E-10 5E-10	1E-4 -	1E-3 -
83	Bismuth-214 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	2E+4 St wall (2E+4) -	8E+2 - 9E-2	3E-7 - 4E-7	1E-9 - 1E-9	- 3E-4 -	- 3E-3 -
84	Polonium-203 ²	D, all compounds except those given for W W, oxides, hydroxides, and nitrates	3E+4 -	6E+4 9E+4	3E-5 4E-5	9E-8 1E-7	3E-4 -	3E-3 -
84	Polonium-205 ²	D, see ²⁰³ Po W, see ²⁰³ Po	2E+4 -	4E+4 7E+4	2E-5 3E-5	5E-8 1E-7	3E-4 -	3E-3 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
				ALI μCi	DAC $\mu\text{Ci/ml}$			$\mu\text{Ci/ml}$
84	Polonium-207	D, see ^{203}Po W, see ^{203}Po	8E+3 -	3E+4 3E+4	1E-5 1E-5	3E-8 4E-8	1E-4 -	1E-3 -
84	Polonium-210	D, see ^{203}Po W, see ^{203}Po	3E+0 -	6E-1 6E-1	3E-10 3E-10	9E-13 9E-13	4E-8 -	4E-7 -
85	Astatine-207 ²	D, halides W	6E+3 -	3E+3 2E+3	1E-6 9E-7	4E-9 3E-9	8E-5 -	8E-4 -
85	Astatine-211	D, halides W	1E+2 -	8E+1 5E+1	3E-8 2E-8	1E-10 8E-11	2E-6 -	2E-5 -
86	Radon-220	With daughters removed With daughters present	- -	2E+4 2E+1 (or 12 work- ing level months)	7E-6 9E-9	2E-8 3E-11 (or 1.0 working level)	- -	- -
86	Radon-222	With daughters removed With daughters present	- -	1E+4 1E+2 (or 4 work- ing level months)	4E-6 3E-8	1E-8 1E-10 (or 0.33 working level)	- -	- -
87	Francium-222 ²	D, all compounds	2E+3	5E+2	2E-7	6E-10	3E-5	3E-4
87	Francium-223 ²	D, all compounds	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
88	Radium-223	W, all compounds	5E+0 Bone surf (9E+0)	7E-1 -	3E-10 -	9E-13 -	- 1E-7	- 1E-6
88	Radium-224	W, all compounds	8E+0 Bone surf (2E+1)	2E+0 -	7E-10 -	2E-12 -	- 2E-7	- 2E-6
88	Radium-225	W, all compounds	8E+0 Bone surf (2E+1)	7E-1 -	3E-10 -	9E-13 -	- 2E-7	- 2E-6
88	Radium-226	W, all compounds	2E+0 Bone surf (5E+0)	6E-1 -	3E-10 -	9E-13 -	- 6E-8	- 6E-7
88	Radium-227 ²	W, all compounds	2E+4 Bone surf (2E+4)	1E+4 Bone surf (2E+4)	6E-6 -	- 3E-8	- 3E-4	- 3E-3
88	Radium-228	W, all compounds	2E+0 Bone surf (4E+0)	1E+0 -	5E-10 -	2E-12 -	- 6E-8	- 6E-7
89	Actinium-224	D, all compounds except those given for W and Y	2E+3 LLI wall (2E+3)	3E+1 Bone surf (4E+1)	1E-8 -	- 5E-11	- 3E-5	- 3E-4
		W, halides and nitrates Y, oxides and hydroxides	- -	5E+1 5E+1	2E-8 2E-8	7E-11 6E-11	- -	- -
89	Actinium-225	D, see ^{224}Ac	5E+1 LLI wall (5E+1)	3E-1 Bone surf (5E-1)	1E-10 -	- 7E-13	- 7E-7	- 7E-6
		W, see ^{224}Ac Y, see ^{224}Ac	- -	6E-1 6E-1	3E-10 3E-10	9E-13 9E-13	- -	- -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
89	Actinium-226	D, see ²²⁴ Ac	1E+2	3E+0	1E-9	-	-	-
			LLI wall (1E+2)	Bone surf (4E+0)	-	5E-12	2E-6	2E-5
		W, see ²²⁴ Ac	-	5E+0	2E-9	7E-12	-	-
		Y, see ²²⁴ Ac	-	5E+0	2E-9	6E-12	-	-
89	Actinium-227	D, see ²²⁴ Ac	2E-1	4E-4	2E-13	-	-	-
			Bone surf (4E-1)	Bone surf (8E-4)	-	1E-15	5E-9	5E-8
		W, see ²²⁴ Ac	-	2E-3	7E-13	-	-	-
		Y, see ²²⁴ Ac	-	Bone surf (3E-3)	-	4E-15	-	-
			-	4E-3	2E-12	6E-15	-	-
89	Actinium-228	D, see ²²⁴ Ac	2E+3	9E+0	4E-9	-	3E-5	3E-4
			-	Bone surf (2E+1)	-	2E-11	-	-
		W, see ²²⁴ Ac	-	4E+1	2E-8	-	-	-
		Y, see ²²⁴ Ac	-	Bone surf (6E+1)	-	8E-11	-	-
			-	4E+1	2E-8	6E-11	-	-
90	Thorium-226 ²	W, all compounds except those given for Y	5E+3	2E+2	6E-8	2E-10	-	-
		Y, oxides and hydroxides	-	-	-	-	7E-5	7E-4
		W, see ²²⁶ Th	1E+2	3E-1	1E-10	5E-13	2E-6	2E-5
		Y, see ²²⁶ Th	-	3E-1	1E-10	5E-13	-	-
90	Thorium-228	W, see ²²⁶ Th	6E+0	1E-2	4E-12	-	-	-
			Bone surf (1E+1)	Bone surf (2E-2)	-	3E-14	2E-7	2E-6
		Y, see ²²⁶ Th	-	2E-2	7E-12	2E-14	-	-
90	Thorium-229	W, see ²²⁶ Th	6E-1	9E-4	4E-13	-	-	-
			Bone surf (1E+0)	Bone surf (2E-3)	-	3E-15	2E-8	2E-7
		Y, see ²²⁶ Th	-	2E-3	1E-12	-	-	-
			-	Bone surf (3E-3)	-	4E-15	-	-
90	Thorium-230	W, see ²²⁶ Th	4E+0	6E-3	3E-12	-	-	-
			Bone surf (9E+0)	Bone surf (2E-2)	-	2E-14	1E-7	1E-6
		Y, see ²²⁶ Th	-	2E-2	6E-12	-	-	-
			-	Bone surf (2E-2)	-	3E-14	-	-
90	Thorium-231	W, see ²²⁶ Th	4E+3	6E+3	3E-6	9E-9	5E-5	5E-4
		Y, see ²²⁶ Th	-	6E+3	3E-6	9E-9	-	-
90	Thorium-232	W, see ²²⁶ Th	7E-1	1E-3	5E-13	-	-	-
			Bone surf (2E+0)	Bone surf (3E-3)	-	4E-15	3E-8	3E-7
		Y, see ²²⁶ Th	-	3E-3	1E-12	-	-	-
			-	Bone surf (4E-3)	-	6E-15	-	-
90	Thorium-234	W, see ²²⁶ Th	3E+2	2E+2	8E-8	3E-10	-	-
			LLI wall (4E+2)	-	-	-	5E-6	5E-5
		Y, see ²²⁶ Th	-	2E+2	6E-8	2E-10	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
91	Protactinium-227 ²	W, all compounds except those given for Y	4E+3	1E+2	5E-8	2E-10	5E-5	5E-4
		Y, oxides and hydroxides	-	1E+2	4E-8	1E-10	-	-
91	Protactinium-228	W, see ²²⁷ Pa	1E+3	1E+1	5E-9	-	2E-5	2E-4
		Y, see ²²⁷ Pa	-	Bone surf (2E+1) 1E+1	- 5E-9	3E-11 2E-11	-	-
91	Protactinium-230	W, see ²²⁷ Pa	6E+2	5E+0	2E-9	7E-12	-	-
		Y, see ²²⁷ Pa	Bone surf (9E+2) -	- 4E+0	- 1E-9	- 5E-12	1E-5 -	1E-4 -
91	Protactinium-231	W, see ²²⁷ Pa	2E-1	2E-3	6E-13	-	-	-
		Y, see ²²⁷ Pa	Bone surf (5E-1) -	Bone surf (4E-3) 4E-3 Bone surf (6E-3)	- 2E-12 -	6E-15 -	6E-9 -	6E-8 -
91	Protactinium-232	W, see ²²⁷ Pa	1E+3	2E+1	9E-9	-	2E-5	2E-4
		Y, see ²²⁷ Pa	-	Bone surf (6E+1) 6E+1 Bone surf (7E+1)	- 2E-8 -	8E-11 -	-	-
91	Protactinium-233	W, see ²²⁷ Pa	1E+3	7E+2	3E-7	1E-9	-	-
		Y, see ²²⁷ Pa	LLI wall (2E+3) -	- 6E+2	- 2E-7	- 8E-10	2E-5 -	2E-4 -
91	Protactinium-234	W, see ²²⁷ Pa	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		Y, see ²²⁷ Pa	-	7E+3	3E-6	9E-9	-	-
92	Uranium-230	D, UF ₆ , UO ₂ F ₂ , UO ₂ (NO ₃) ₂	4E+0	4E-1	2E-10	-	-	-
		W, UO ₃ , UF ₄ , UCl ₄	Bone surf (6E+0) -	Bone surf (6E-1) 4E-1	- 1E-10	8E-13 5E-13	8E-8 -	8E-7 -
		Y, UO ₂ , U ₃ O ₈	-	3E-1	1E-10	4E-13	-	-
92	Uranium-231	D, see ²³⁰ U	5E+3	8E+3	3E-6	1E-8	-	-
		W, see ²³⁰ U	LLI wall (4E+3) -	- 6E+3	- 2E-6	- 8E-9	6E-5 -	6E-4 -
		Y, see ²³⁰ U	-	5E+3	2E-6	6E-9	-	-
92	Uranium-232	D, see ²³⁰ U	2E+0	2E-1	9E-11	-	-	-
		W, see ²³⁰ U	Bone surf (4E+0) -	Bone surf (4E-1) 4E-1	- 2E-10	6E-13 5E-13	6E-8 -	6E-7 -
		Y, see ²³⁰ U	-	8E-3	3E-12	1E-14	-	-
92	Uranium-233	D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
		W, see ²³⁰ U	Bone surf (2E+1) -	Bone surf (2E+0) 7E-1	- 3E-10	3E-12 1E-12	3E-7 -	3E-6 -
		Y, see ²³⁰ U	-	4E-2	2E-11	5E-14	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
92	Uranium-234 ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	7E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	5E-14	-	-
92	Uranium-235 ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
92	Uranium-236	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
92	Uranium-237	D, see ²³⁰ U	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
		W, see ²³⁰ U	-	2E+3	7E-7	2E-9	-	-
		Y, see ²³⁰ U	-	2E+3	6E-7	2E-9	-	-
92	Uranium-238 ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
92	Uranium-239 ²	D, see ²³⁰ U	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		W, see ²³⁰ U	-	2E+5	7E-5	2E-7	-	-
		Y, see ²³⁰ U	-	2E+5	6E-5	2E-7	-	-
92	Uranium-240	D, see ²³⁰ U	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see ²³⁰ U	-	3E+3	1E-6	4E-9	-	-
		Y, see ²³⁰ U	-	2E+3	1E-6	3E-9	-	-
92	Uranium-natural ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	9E-13	-	-
		Y, see ²³⁰ U	-	5E-2	2E-11	9E-14	-	-
93	Neptunium-232 ²	W, all compounds	1E+5	2E+3 Bone surf (5E+2)	7E-7 -	- 6E-9	2E-3 -	2E-2 -
			-	-	-	-	-	-
93	Neptunium-233 ²	W, all compounds	8E+5	3E+6	1E-3	4E-6	1E-2	1E-1
93	Neptunium-234	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
93	Neptunium-235	W, all compounds	2E+4 LLI wall (2E+4)	8E+2 Bone surf (1E+3)	3E-7 -	- 2E-9	- 3E-4	- 3E-3
			-	-	-	-	-	-
93	Neptunium-236 (1.15E+5 y)	W, all compounds	3E+0 Bone surf (6E+0)	2E-2 Bone surf (5E-2)	9E-12 -	- 8E-14	- 9E-8	- 9E-7
93	Neptunium-236 (22.5 h)	W, all compounds	3E+3 Bone surf (4E+3)	3E+1 Bone surf (7E+1)	1E-8 -	- 1E-10	- 5E-5	- 5E-4

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
93	Neptunium-237	W, all compounds	5E-1 Bone surf (1E+0)	4E-3 Bone surf (1E-2)	2E-12 -	- 1E-14	- 2E-8	- 2E-7
93	Neptunium-238	W, all compounds	1E+3 -	6E+1 Bone surf (2E+2)	3E-8 -	- 2E-10	2E-5 -	2E-4 -
93	Neptunium-239	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	9E-7 -	3E-9 -	- 2E-5	- 2E-4
93	Neptunium-240 ²	W, all compounds	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
94	Plutonium-234	W, all compounds except PuO ₂ Y, PuO ₂	8E+3 -	2E+2 2E+2	9E-8 8E-8	3E-10 3E-10	1E-4 -	1E-3 -
94	Plutonium-235 ²	W, see ²³⁴ Pu Y, see ²³⁴ Pu	9E+5 -	3E+6 3E+6	1E-3 1E-3	4E-6 3E-6	1E-2 -	1E-1 -
94	Plutonium-236	W, see ²³⁴ Pu Y, see ²³⁴ Pu	2E+0 Bone surf (4E+0) -	2E-2 Bone surf (4E-2) 4E-2	8E-12 - 2E-11	- 5E-14 6E-14	- 6E-8 -	- 6E-7 -
94	Plutonium-237	W, see ²³⁴ Pu Y, see ²³⁴ Pu	1E+4 -	3E+3 3E+3	1E-6 1E-6	5E-9 4E-9	2E-4 -	2E-3 -
94	Plutonium-238	W, see ²³⁴ Pu Y, see ²³⁴ Pu	9E-1 Bone surf (2E+0) -	7E-3 Bone surf (1E-2) 2E-2	3E-12 - 8E-12	- 2E-14 2E-14	- 2E-8 -	- 2E-7 -
94	Plutonium-239	W, see ²³⁴ Pu Y, see ²³⁴ Pu	8E-1 Bone surf (1E+0) -	6E-3 Bone surf (1E-2) 2E-2 Bone surf (2E-2)	3E-12 - 7E-12 -	- 2E-14 - 2E-14	- 2E-8 -	- 2E-7 -
94	Plutonium-240	W, see ²³⁴ Pu Y, see ²³⁴ Pu	8E-1 Bone surf (1E+0) -	6E-3 Bone surf (1E-2) 2E-2 Bone surf (2E-2)	3E-12 - 7E-12 -	- 2E-14 - 2E-14	- 2E-8 -	- 2E-7 -
94	Plutonium-241	W, see ²³⁴ Pu Y, see ²³⁴ Pu	4E+1 Bone surf (7E+1) -	3E-1 Bone surf (6E-1) 8E-1 Bone surf (1E+0)	1E-10 - 3E-10 -	- 8E-13 - 1E-12	- 1E-6 -	- 1E-5 -
94	Plutonium-242	W, see ²³⁴ Pu Y, see ²³⁴ Pu	8E-1 Bone surf (1E+0) -	7E-3 Bone surf (1E-2) 2E-2 Bone surf (2E-2)	3E-12 - 7E-12 -	- 2E-14 - 2E-14	- 2E-8 -	- 2E-7 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml			μCi/ml		
94	Plutonium-243	W, see ²³⁴ Pu	2E+4	4E+4	2E-5	5E-8	2E-4	2E-3
		Y, see ²³⁴ Pu	-	4E+4	2E-5	5E-8	-	-
94	Plutonium-244	W, see ²³⁴ Pu	8E-1	7E-3	3E-12	-	-	-
			Bone surf (2E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
		Y, see ²³⁴ Pu	-	2E-2	7E-12	-	-	-
			Bone surf (2E-2)	-	2E-14	-	-	
94	Plutonium-245	W, see ²³⁴ Pu	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		Y, see ²³⁴ Pu	-	4E+3	2E-6	6E-9	-	-
94	Plutonium-246	W, see ²³⁴ Pu	4E+2	3E+2	1E-7	4E-10	-	-
			LLI wall (4E+2)	-	-	-	6E-6	6E-5
		Y, see ²³⁴ Pu	-	3E+2	1E-7	4E-10	-	-
95	Americium-237 ²	W, all compounds	8E+4	3E+5	1E-4	4E-7	1E-3	1E-2
95	Americium-238 ²	W, all compounds	4E+4	3E+3	1E-6	-	5E-4	5E-3
			-	Bone surf (6E+3)	-	9E-9	-	-
95	Americium-239	W, all compounds	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
95	Americium-240	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
95	Americium-241	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
95	Americium-242m	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
95	Americium-242	W, all compounds	4E+3	8E+1	4E-8	-	5E-5	5E-4
			-	Bone surf (9E+1)	-	1E-10	-	-
95	Americium-243	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
95	Americium-244m ²	W, all compounds	6E+4	4E+3	2E-6	-	-	-
			St wall (8E+4)	Bone surf (7E+3)	-	1E-8	1E-3	1E-2
95	Americium-244	W, all compounds	3E+3	2E+2	8E-8	-	4E-5	4E-4
			-	Bone surf (3E+2)	-	4E-10	-	-
95	Americium-245	W, all compounds	3E+4	8E+4	3E-5	1E-7	4E-4	4E-3
95	Americium-246m ²	W, all compounds	5E+4	2E+5	8E-5	3E-7	-	-
			St wall (6E+4)	-	-	-	8E-4	8E-3
95	Americium-246 ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
96	Curium-238	W, all compounds	2E+4	1E+3	5E-7	2E-9	2E-4	2E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			Bone surf (8E+1)	ALI μCi	DAC μCi/ml			
96	Curium-240	W, all compounds	6E+1 Bone surf (8E+1)	6E-1 Bone surf (6E-1)	2E-10 -	- 9E-13	- 1E-6	- 1E-5
96	Curium-241	W, all compounds	1E+3 -	3E+1 Bone surf (4E+1)	1E-8 -	- 5E-11	2E-5 -	2E-4 -
96	Curium-242	W, all compounds	3E+1 Bone surf (5E+1)	3E-1 Bone surf (3E-1)	1E-10 -	- 4E-13	- 7E-7	- 7E-6
96	Curium-243	W, all compounds	1E+0 Bone surf (2E+0)	9E-3 Bone surf (2E-2)	4E-12 -	- 2E-14	- 3E-8	- 3E-7
96	Curium-244	W, all compounds	1E+0 Bone surf (3E+0)	1E-2 Bone surf (2E-2)	5E-12 -	- 3E-14	- 3E-8	- 3E-7
96	Curium-245	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-246	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-247	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-248	W, all compounds	2E-1 Bone surf (4E-1)	2E-3 Bone surf (3E-3)	7E-13 -	- 4E-15	- 5E-9	- 5E-8
96	Curium-249 ²	W, all compounds	5E+4 -	2E+4 Bone surf (3E+4)	7E-6 -	- 4E-8	7E-4 -	7E-3 -
96	Curium-250	W, all compounds	4E-2 Bone surf (6E-2)	3E-4 Bone surf (5E-4)	1E-13 -	- 8E-16	- 9E-10	- 9E-9
97	Berkelium-245	W, all compounds	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
97	Berkelium-246	W, all compounds	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
97	Berkelium-247	W, all compounds	5E-1 Bone surf (1E+0)	4E-3 Bone surf (9E-3)	2E-12 -	- 1E-14	- 2E-8	- 2E-7
97	Berkelium-249	W, all compounds	2E+2 Bone surf (5E+2)	2E+0 Bone surf (4E+0)	7E-10 -	- 5E-12	- 6E-6	- 6E-5
97	Berkelium-250	W, all compounds	9E+3 -	3E+2 Bone surf (7E+2)	1E-7 -	- 1E-9	1E-4 -	1E-3 -
98	Californium-244 ²	W, all compounds except those given for Y	3E+4 St wall (3E+4)	6E+2 -	2E-7 -	8E-10 -	- 4E-4	- 4E-3
		Y, oxides and hydroxides	-	6E+2	2E-7	8E-10	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
98	Californium-246	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	4E+2 -	ALI μCi 9E+0 9E+0	DAC $\mu\text{Ci/ml}$ 4E-9 4E-9	1E-11 1E-11	5E-6 -	5E-5 -
98	Californium-248	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	8E+0 Bone surf (2E+1) -	6E-2 Bone surf (1E-1) 1E-1	3E-11 - 4E-11	- 2E-13 1E-13	- 2E-7 -	- 2E-6 -
98	Californium-249	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	5E-1 Bone surf (1E+0) -	4E-3 Bone surf (9E-3) 1E-2 Bone surf (1E-2)	2E-12 - 4E-12 -	- 1E-14 -	- 2E-8 -	- 2E-7 -
98	Californium-250	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	1E+0 Bone surf (2E+0) -	9E-3 Bone surf (2E-2) 3E-2	4E-12 - 1E-11	- 3E-14 4E-14	- 3E-8 -	- 3E-7 -
98	Californium-251	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	5E-1 Bone surf (1E+0) -	4E-3 Bone surf (9E-3) 1E-2 Bone surf (1E-2)	2E-12 - 4E-12 -	- 1E-14 -	- 2E-8 -	- 2E-7 -
98	Californium-252	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	2E+0 Bone surf (5E+0) -	2E-2 Bone surf (4E-2) 3E-2	8E-12 - 1E-11	- 5E-14 5E-14	- 7E-8 -	- 7E-7 -
98	Californium-253	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	2E+2 Bone surf (4E+2) -	2E+0 - 2E+0	8E-10 - 7E-10	3E-12 - 2E-12	- 5E-6 -	- 5E-5 -
98	Californium-254	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	2E+0 -	2E-2 2E-2	9E-12 7E-12	3E-14 2E-14	3E-8 -	3E-7 -
99	Einsteinium-250	W, all compounds	4E+4 -	5E+2 Bone surf (1E+3)	2E-7 -	- 2E-9	6E-4 -	6E-3 -
99	Einsteinium-251	W, all compounds	7E+3 -	9E+2 Bone surf (1E+3)	4E-7 -	- 2E-9	1E-4 -	1E-3 -
99	Einsteinium-253	W, all compounds	2E+2	1E+0	6E-10	2E-12	2E-6	2E-5
99	Einsteinium-254m	W, all compounds	3E+2 LLI wall (3E+2)	1E+1 -	4E-9 -	1E-11 -	- 4E-6	- 4E-5
99	Einsteinium-254	W, all compounds	8E+0 Bone surf (2E+1)	7E-2 Bone surf (1E-1)	3E-11 -	- 2E-13	- 2E-7	- 2E-6
100	Fermium-252	W, all compounds	5E+2	1E+1	5E-9	2E-11	6E-6	6E-5
100	Fermium-253	W, all compounds	1E+3	1E+1	4E-9	1E-11	1E-5	1E-4
100	Fermium-254	W, all compounds	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
100	Fermium-255	W, all compounds	5E+2	ALI μCi	DAC μCi/ml	3E-11	7E-6	7E-5
100	Fermium-257	W, all compounds	2E+1 Bone surf (4E+1)	2E-1 Bone surf (2E-1)	7E-11	- 3E-13	- 5E-7	- 5E-6
101	Mendelevium-257	W, all compounds	7E+3	8E+1 Bone surf (9E+1)	4E-8	- 1E-10	1E-4	1E-3
101	Mendelevium-258	W, all compounds	3E+1 Bone surf (5E+1)	2E-1 Bone surf (3E-1)	1E-10	- 5E-13	- 6E-7	- 6E-6
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	Submersion ¹	-	2E+2	1E-7	1E-9	-	-
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	....	-	2E-1	1E-10	1E-12	1E-8	1E-7
-	Any single radionuclide not listed above that decays by alpha emission or spontaneous fission, or any mixture for which either the identity or the concentration of any radionuclide in the mixture is not known	....	-	4E-4	2E-13	1E-15	2E-9	2E-8

FOOTNOTES:

¹"Submersion" means that values given are for submersion in a hemispherical semi-infinite cloud of airborne material.

²These radionuclides have radiological half-lives of less than 2 hours. The total effective dose equivalent received during operations with these radionuclides might include a significant contribution from external exposure. The DAC values for all radionuclides, other than those designated Class "Submersion," are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body and do NOT include potentially significant contributions to dose equivalent from external exposures. The licensee may substitute 1E-7 μCi/ml for the listed DAC to account for the submersion dose prospectively, but should use individual monitoring devices or other radiation measuring instruments that measure external exposure to demonstrate compliance with the limits. (See WAC 246-221-015(5).)

³For soluble mixtures of U-238, U-234, and U-235 in air, chemical toxicity may be the limiting factor (see WAC 246-221-010(5)). If the percent by weight (enrichment) of U-235 is not greater than 5, the concentration value for a 40-hour workweek is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour workweek shall not exceed 8E-3 (SA) μCi-hr/ml, where SA is the specific activity of the uranium inhaled. The specific activity for natural uranium is 6.77E-7 curies per gram U. The specific activity for other mixtures of U-238, U-235, and U-234, if not known, shall be:

SA = 3.6E-7 curies/gram U, U-depleted

SA = [0.4 + 0.38 (enrichment) + 0.0034 (enrichment)²] E-6, enrichment ≥ 0.72

where enrichment is the percentage by weight of U-235, expressed as percent.

NOTE:

1. If the identity of each radionuclide in a mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.
2. If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this appendix are not present in the mixture, the inhalation ALI, DAC, and effluent and sewage concentrations for the mixture are the lowest values specified in this appendix for any radionuclide that is not known to be absent from the mixture; or

If it is known that Ac-227-D and Cm-250-W are not present - 7E-4 3E-13 - -

If, in addition, it is known that Ac-227-W,Y, Th-229-W,Y, Th-230-W, Th-232-W,Y, Pa-231-W,Y, Np-237-W, Pu-239-W, Pu-240-W, Pu-242-W, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-245-W, Cm-246-W, Cm-247-W, Cm-248-W, Bk-247-W, Cf-249-W, and Cf-251-W are not present

7E-3 3E-12

If, in addition, it is known that Sm-146-W, Sm-147-W, Gd-148-D,W, Gd-152-D,W, Th-228-W,Y, Th-230-Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, Np-236-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-Y, Pu-240-Y, Pu-242-Y, Pu-244-W,Y, Cm-243-W, Cm-244-W, Cf-248-W, Cf-249-Y, Cf-250-W,Y, Cf-251-Y, Cf-252-W,Y, and Cf-254-W,Y are not present

7E-2 3E-11

If, in addition, it is known that Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-Y, Es-254-W, Fm-257-W, and Md-258-W are not present

7E-1 3E-10

If, in addition, it is known that Si-32-Y, Ti-44-Y, Fe-60-D, Sr-90-Y, Zr-93-D, Cd-113m-D, Cd-113-D, In-115-D,W, La-138-D, Lu-176-W, Hf-178m-D,W, Hf-182-D,W, Bi-210m-D, Ra-224-W, Ra-228-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, Pu-241-Y, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present

7E+0 3E-9

If it is known that Ac-227-D,W,Y, Th-229-W,Y, Th-232-W,Y, Pa-231-W,Y, Cm-248-W, and Cm-250-W are not present

1E-14

If, in addition, it is known that Sm-146-W, Gd-148-D,W, Gd-152-D, Th-228-W,Y, Th-230-W,Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, U-Nat-Y, Np-236-W, Np-237-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-W,Y, Pu-240-W,Y, Pu-242-W,Y, Pu-244-W,Y, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-244-W, Cm-245-W, Cm-246-W, Cm-247-W, Bk-247-W, Cf-249-W,Y, Cf-250-W,Y, Cf-251-W,Y, Cf-252-W,Y, and Cf-254-W,Y are not present

1E-13

If, in addition, it is known that Sm-147-W, Gd-152-W, Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, U-Nat-W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W, and Md-258-W are not present

1E-12

If, in addition, it is known that Fe-60, Sr-90, Cd-113m, Cd-113, In-115, I-129, Cs-134, Sm-145, Sm-147, Gd-148, Gd-152, Hg-194 (organic), Bi-210m, Ra-223, Ra-224, Ra-225, Ac-225, Th-228, Th-230, U-233, U-234, U-235, U-236, U-238, U-Nat, Cm-242, Cf-248, Es-254, Fm-257, and Md-258 are not present

1E-6

1E-5

3. If a mixture of radionuclides consists of uranium and its daughters in ore dust (10 µm AMAD particle distribution assumed) prior to chemical separation of the uranium from the ore, the following values may be used for the DAC of the mixture: 6E-11 µCi of gross alpha activity from uranium-238, uranium-234, thorium-230, and radium-226 per milliliter of air; 3E-11 µCi of natural uranium per milliliter of air; or 45 micrograms of natural uranium per cubic meter of air.

4. If the identity and concentration of each radionuclide in a mixture are known, the limiting values should be derived as follows: Determine, for each radionuclide in the mixture, the ratio between the concentration present in the mixture and the concentration otherwise established in this section for the specific radionuclide when not in a mixture. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity"). Example: If radionuclides "A," "B," and "C" are present in concentrations CA, CB, and CC, and if the applicable DACs are DAC_A, DAC_B, and DAC_C, respectively, then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_A}{DAC_A} + \frac{C_B}{DAC_B} + \frac{C_C}{DAC_C} \leq 1$$

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-290, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70 040, 91-02-049 (Order 121), recodified as 246-221-290, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-220, filed 12/8/80; Order 1095, § 402-24-220, filed 2/6/76; Order 1, § 402-24-220, filed 1/8/69; Rules (part), filed 10/26/66.]

Reviser's note: The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.

WAC 246-221-300 Appendix B—Minimum quantities of radioactive material requiring labeling.

Minimum Quantities¹ of Radioactive Material Requiring Labeling

Radionuclide	Quantity*(µCi)	Radionuclide	Quantity*(µCi)
Actinium-224	1	Americium-238	100
Actinium-225	0.01	Americium-239	1,000
Actinium-226	0.1	Americium-240	100
Actinium-227	0.001	Americium-241	0.001
Actinium-228	1	Americium-242	10
Aluminum-26	10	Americium-242m	0.001
Americium-237	1,000	Americium-243	0.001
		Americium-244	10
		Americium-244m	100
		Americium-245	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Americium-246	1,000
Americium-246m	1,000
Antimony-115	1,000
Antimony-116	1,000
Antimony-116m	1,000
Antimony-117	1,000
Antimony-118m	1,000
Antimony-119	1,000
Antimony-120 (16min)	1,000
Antimony-120 (5.76d)	100
Antimony-122	100
Antimony-124	10
Antimony-124m	1,000
Antimony-125	100
Antimony-126	100
Antimony-126m	1,000
Antimony-127	100
Antimony-128 (9.01h)	100
Antimony-128 (10.4min)	1,000
Antimony-129	100
Antimony-130	1,000
Antimony-131	1,000
Argon-39	1,000
Argon-41	1,000
Arsenic-69	1,000
Arsenic-70	1,000
Arsenic-71	100
Arsenic-72	100
Arsenic-73	100
Arsenic-74	100
Arsenic-76	100
Arsenic-77	100
Arsenic-78	1,000
Astatine-207	100
Astatine-211	10
Barium-126	1,000
Barium-128	100
Barium-131	100
Barium-131m	1,000
Barium-133	100
Barium-133m	100
Barium-135m	100
Barium-139	1,000
Barium-140	100
Barium-141	1,000
Barium-142	1,000
Berkelium-245	100
Berkelium-246	100
Berkelium-247	0.001
Berkelium-249	0.1
Berkelium-250	10
Beryllium-7	1,000
Beryllium-10	1
Bismuth-200	1,000
Bismuth-201	1,000
Bismuth-202	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Bismuth-203	100
Bismuth-205	100
Bismuth-206	100
Bismuth-207	10
Bismuth-210	1
Bismuth-210m	0.1
Bismuth-212	10
Bismuth-213	10
Bismuth-214	100
Bromine-74	1,000
Bromine-74m	1,000
Bromine-75	1,000
Bromine-76	100
Bromine-77	1,000
Bromine-80	1,000
Bromine-80m	1,000
Bromine-82	100
Bromine-83	1,000
Bromine-84	1,000
Cadmium-104	1,000
Cadmium-107	1,000
Cadmium-109	1
Cadmium-113	100
Cadmium-113m	0.1
Cadmium-115	100
Cadmium-115m	10
Cadmium-117	1,000
Cadmium-117m	1,000
Calcium-41	100
Calcium-45	100
Calcium-47	100
Californium-244	100
Californium-246	1
Californium-248	0.01
Californium-249	0.001
Californium-250	0.001
Californium-251	0.001
Californium-252	0.001
Californium-253	0.1
Californium-254	0.001
Carbon-11	1,000
Carbon-14	1,000
Cerium-134	100
Cerium-135	100
Cerium-137	1,000
Cerium-137m	100
Cerium-139	100
Cerium-141	100
Cerium-143	100
Cerium-144	1
Cesium-125	1,000
Cesium-127	1,000
Cesium-129	1,000
Cesium-130	1,000
Cesium-131	1,000
Cesium-132	100

Minimum Quantities ¹ of Radioactive Material Requiring Labeling		Minimum Quantities ¹ of Radioactive Material Requiring Labeling	
Radionuclide	Quantity*(μ Ci)	Radionuclide	Quantity*(μ Ci)
Cesium-134	10	Europium-149	100
Cesium-134m	1,000	Europium-150 (12.62h)	100
Cesium-135	100	Europium-150 (34.2y)	1
Cesium-135m	1,000	Europium-152	1
Cesium-136	10	Europium-152m	100
Cesium-137	10	Europium-154	1
Cesium-138	1,000	Europium-155	10
Chlorine-36	10	Europium-156	100
Chlorine-38	1,000	Europium-157	100
Chlorine-39	1,000	Europium-158	1,000
Chromium-48	1,000	Fermium-252	1
Chromium-49	1,000	Fermium-253	1
Chromium-51	1,000	Fermium-254	10
Cobalt-55	100	Fermium-255	1
Cobalt-56	10	Fermium-257	0.01
Cobalt-57	100	Fluorine-18	1,000
Cobalt-58	100	Francium-222	100
Cobalt-58m	1,000	Francium-223	100
Cobalt-60	1	Gadolinium-145	1,000
Cobalt-60m	1,000	Gadolinium-146	10
Cobalt-61	1,000	Gadolinium-147	100
Cobalt-62m	1,000	Gadolinium-148	0.001
Copper-60	1,000	Gadolinium-149	100
Copper-61	1,000	Gadolinium-151	10
Copper-64	1,000	Gadolinium-152	100
Copper-67	1,000	Gadolinium-153	10
Curium-238	100	Gadolinium-159	100
Curium-240	0.1	Gallium-65	1,000
Curium-241	1	Gallium-66	100
Curium-242	0.01	Gallium-67	1,000
Curium-243	0.001	Gallium-68	1,000
Curium-244	0.001	Gallium-70	1,000
Curium-245	0.001	Gallium-72	100
Curium-246	0.001	Gallium-73	1,000
Curium-247	0.001	Germanium-66	1,000
Curium-248	0.001	Germanium-67	1,000
Curium-249	1,000	Germanium-68	10
Dysprosium-155	1,000	Germanium-69	1,000
Dysprosium-157	1,000	Germanium-71	1,000
Dysprosium-159	100	Germanium-75	1,000
Dysprosium-165	1,000	Germanium-77	1,000
Dysprosium-166	100	Germanium-78	1,000
Einsteinium-250	100	Gold-193	1,000
Einsteinium-251	100	Gold-194	100
Einsteinium-253	0.1	Gold-195	10
Einsteinium-254	0.01	Gold-198	100
Einsteinium-254m	1	Gold-198m	100
Erbium-161	1,000	Gold-199	100
Erbium-165	1,000	Gold-200	1,000
Erbium-169	100	Gold-200m	100
Erbium-171	100	Gold-201	1,000
Erbium-172	100	Hafnium-170	100
Europium-145	100	Hafnium-172	1
Europium-146	100	Hafnium-173	1,000
Europium-147	100	Hafnium-175	100
Europium-148	10	Hafnium-177m	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Hafnium-178m	0.1
Hafnium-179m	10
Hafnium-180m	1,000
Hafnium-181	10
Hafnium-182	0.1
Hafnium-182m	1,000
Hafnium-183	1,000
Hafnium-184	100
Holmium-155	1,000
Holmium-157	1,000
Holmium-159	1,000
Holmium-161	1,000
Holmium-162	1,000
Holmium-162m	1,000
Holmium-164	1,000
Holmium-164m	1,000
Holmium-166	100
Holmium-166m	1
Holmium-167	1,000
Hydrogen-3	1,000
Indium-109	1,000
Indium-110 (4.9h)	1,000
Indium-110m (69.1min)	1,000
Indium-111	100
Indium-112	1,000
Indium-113m	1,000
Indium-114m	10
Indium-115	100
Indium-115m	1,000
Indium-116m	1,000
Indium-117	1,000
Indium-117m	1,000
Indium-119m	1,000
Iodine-120	100
Iodine-120m	1,000
Iodine-121	1,000
Iodine-123	100
Iodine-124	10
Iodine-125	1
Iodine-126	1
Iodine-128	1,000
Iodine-129	1
Iodine-130	10
Iodine-131	1
Iodine-132	100
Iodine-132m	100
Iodine-133	10
Iodine-134	1,000
Iodine-135	100
Iridium-182	1,000
Iridium-184	1,000
Iridium-185	1,000
Iridium-186	100
Iridium-187	1,000
Iridium-188	100
Iridium-189	100

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Iridium-190	100
Iridium-190m	1,000
Iridium-192 (73.8d)	1
Iridium-192m (1.4min)	10
Iridium-194	100
Iridium-194m	10
Iridium-195	1,000
Iridium-195m	1,000
Iron-52	100
Iron-55	100
Iron-59	10
Iron-60	1
Krypton-74	1,000
Krypton-76	1,000
Krypton-77	1,000
Krypton-79	1,000
Krypton-81	1,000
Krypton-83m	1,000
Krypton-85	1,000
Krypton-85m	1,000
Krypton-87	1,000
Krypton-88	1,000
Lanthanum-131	1,000
Lanthanum-132	100
Lanthanum-135	1,000
Lanthanum-137	10
Lanthanum-138	100
Lanthanum-140	100
Lanthanum-141	100
Lanthanum-142	1,000
Lanthanum-143	1,000
Lead-195m	1,000
Lead-198	1,000
Lead-199	1,000
Lead-200	100
Lead-201	1,000
Lead-202	10
Lead-202m	1,000
Lead-203	1,000
Lead-205	100
Lead-209	1,000
Lead-210	0.01
Lead-211	100
Lead-212	1
Lead-214	100
Lutetium-169	100
Lutetium-170	100
Lutetium-171	100
Lutetium-172	100
Lutetium-173	10
Lutetium-174	10
Lutetium-174m	10
Lutetium-176	100
Lutetium-176m	1,000
Lutetium-177	100
Lutetium-177m	10

Minimum Quantities ¹ of Radioactive Material Requiring Labeling		Minimum Quantities ¹ of Radioactive Material Requiring Labeling	
Radionuclide	Quantity*(μ Ci)	Radionuclide	Quantity*(μ Ci)
Lutetium-178	1,000	Niobium-95	100
Lutetium-178m	1,000	Niobium-95m	100
Lutetium-179	1,000	Niobium-96	100
Magnesium-28	100	Niobium-97	1,000
Manganese-51	1,000	Niobium-98	1,000
Manganese-52	100	Osmium-180	1,000
Manganese-52m	1,000	Osmium-181	1,000
Manganese-53	1,000	Osmium-182	100
Manganese-54	100	Osmium-185	100
Manganese-56	1,000	Osmium-189m	1,000
Mendelevium-257	10	Osmium-191	100
Mendelevium-258	0.01	Osmium-191m	1,000
Mercury-193	1,000	Osmium-193	100
Mercury-193m	100	Osmium-194	1
Mercury-194	1	Palladium-100	100
Mercury-195	1,000	Palladium-101	1,000
Mercury-195m	100	Palladium-103	100
Mercury-197	1,000	Palladium-107	10
Mercury-197m	100	Palladium-109	100
Mercury-199m	1,000	Phosphorus-32	10
Mercury-203	100	Phosphorus-33	100
Molybdenum-90	100	Platinum-186	1,000
Molybdenum-93	10	Platinum-188	100
Molybdenum-93m	100	Platinum-189	1,000
Molybdenum-99	100	Platinum-191	100
Molybdenum-101	1,000	Platinum-193	1,000
Neodymium-136	1,000	Platinum-193m	100
Neodymium-138	100	Platinum-195m	100
Neodymium-139	1,000	Platinum-197	100
Neodymium-139m	1,000	Platinum-197m	1,000
Neodymium-141	1,000	Platinum-199	1,000
Neodymium-147	100	Platinum-200	100
Neodymium-149	1,000	Plutonium-234	10
Neodymium-151	1,000	Plutonium-235	1,000
Neptunium-232	100	Plutonium-236	0.001
Neptunium-233	1,000	Plutonium-237	100
Neptunium-234	100	Plutonium-238	0.001
Neptunium-235	100	Plutonium-239	0.001
Neptunium-236 (1.15E+5y)	0.001	Plutonium-240	0.001
Neptunium-236 (22.5h)	1	Plutonium-241	0.01
Neptunium-237	0.001	Plutonium-242	0.001
Neptunium-238	10	Plutonium-243	1,000
Neptunium-239	100	Plutonium-244	0.001
Neptunium-240	1,000	Plutonium-245	100
Nickel-56	100	Polonium-203	1,000
Nickel-57	100	Polonium-205	1,000
Nickel-59	100	Polonium-207	1,000
Nickel-63	100	Polonium-210	0.1
Nickel-65	1,000	Potassium-40	100
Nickel-66	10	Potassium-42	1,000
Niobium-88	1,000	Potassium-43	1,000
Niobium-89 (122min)	1,000	Potassium-44	1,000
Niobium-89m (66min)	1,000	Potassium-45	1,000
Niobium-90	100	Praseodymium-136	1,000
Niobium-93m	10	Praseodymium-137	1,000
Niobium-94	1	Praseodymium-138m	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Praseodymium-139	1,000
Praseodymium-142	100
Praseodymium-142m	1,000
Praseodymium-143	100
Praseodymium-144	1,000
Praseodymium-145	100
Praseodymium-147	1,000
Promethium-141	1,000
Promethium-143	100
Promethium-144	10
Promethium-145	10
Promethium-146	1
Promethium-147	10
Promethium-148	10
Promethium-148m	10
Promethium-149	100
Promethium-150	1,000
Promethium-151	100
Protactinium-227	10
Protactinium-228	1
Protactinium-230	0.1
Protactinium-231	0.001
Protactinium-232	1
Protactinium-233	100
Protactinium-234	100
Radium-223	0.1
Radium-224	0.1
Radium-225	0.1
Radium-226	0.1
Radium-227	1,000
Radium-228	0.1
Radon-220	1
Radon-222	1
Rhenium-177	1,000
Rhenium-178	1,000
Rhenium-181	1,000
Rhenium-182 (64.0h)	100
Rhenium-182 (12.7h)	1,000
Rhenium-184	100
Rhenium-184m	10
Rhenium-186	100
Rhenium-186m	10
Rhenium-187	1,000
Rhenium-188	100
Rhenium-188m	1,000
Rhenium-189	100
Rhodium-99	100
Rhodium-99m	1,000
Rhodium-100	100
Rhodium-101	10
Rhodium-101m	1,000
Rhodium-102	10
Rhodium-102m	10
Rhodium-103m	1,000
Rhodium-105	100
Rhodium-106m	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Rhodium-107	1,000
Rubidium-79	1,000
Rubidium-81	1,000
Rubidium-81m	1,000
Rubidium-82m	1,000
Rubidium-83	100
Rubidium-84	100
Rubidium-86	100
Rubidium-87	100
Rubidium-88	1,000
Rubidium-89	1,000
Ruthenium-94	1,000
Ruthenium-97	1,000
Ruthenium-103	100
Ruthenium-105	1,000
Ruthenium-106	1
Samarium-141	1,000
Samarium-141m	1,000
Samarium-142	1,000
Samarium-145	100
Samarium-146	1
Samarium-147	100
Samarium-151	10
Samarium-153	100
Samarium-155	1,000
Samarium-156	1,000
Scandium-43	1,000
Scandium-44	100
Scandium-44m	100
Scandium-46	10
Scandium-47	100
Scandium-48	100
Scandium-49	1,000
Selenium-70	1,000
Selenium-73	100
Selenium-73m	1,000
Selenium-75	100
Selenium-79	100
Selenium-81	1,000
Selenium-81m	1,000
Selenium-83	1,000
Silicon-31	1,000
Silicon-32	1
Silver-102	1,000
Silver-103	1,000
Silver-104	1,000
Silver-104m	1,000
Silver-105	100
Silver-106	1,000
Silver-106m	100
Silver-108m	1
Silver-111	100
Silver-112	100
Silver-115	1,000
Silver-110m	10
Sodium-22	10

Minimum Quantities ¹ of Radioactive Material Requiring Labeling		Minimum Quantities ¹ of Radioactive Material Requiring Labeling	
Radionuclide	Quantity*(μ Ci)	Radionuclide	Quantity*(μ Ci)
Sodium-24	100	Tellurium-134	1,000
Strontium-80	100	Terbium-147	1,000
Strontium-81	1,000	Terbium-149	100
Strontium-83	100	Terbium-150	1,000
Strontium-85	100	Terbium-151	100
Strontium-85m	1,000	Terbium-153	1,000
Strontium-87m	1,000	Terbium-154	100
Strontium-89	10	Terbium-155	1,000
Strontium-90	0.1	Terbium-156	100
Strontium-91	100	Terbium-156m (24.4h)	1,000
Strontium-92	100	Terbium-156m (5.0h)	1,000
Sulfur-35	100	Terbium-157	10
Tantalum-172	1,000	Terbium-158	1
Tantalum-173	1,000	Terbium-160	10
Tantalum-174	1,000	Terbium-161	100
Tantalum-175	1,000	Thallium-194	1,000
Tantalum-176	100	Thallium-194m	1,000
Tantalum-177	1,000	Thallium-195	1,000
Tantalum-178	1,000	Thallium-197	1,000
Tantalum-179	100	Thallium-198	1,000
Tantalum-180	100	Thallium-198m	1,000
Tantalum-180m	1,000	Thallium-199	1,000
Tantalum-182	10	Thallium-200	1,000
Tantalum-182m	1,000	Thallium-201	1,000
Tantalum-183	100	Thallium-202	100
Tantalum-184	100	Thallium-204	100
Tantalum-185	1,000	Thorium-226	10
Tantalum-186	1,000	Thorium-227	0.01
Technetium-93	1,000	Thorium-228	0.001
Technetium-93m	1,000	Thorium-229	0.001
Technetium-94	1,000	Thorium-230	0.001
Technetium-94m	1,000	Thorium-231	100
Technetium-96	100	Thorium-232	100
Technetium-96m	1,000	Thorium-234	10
Technetium-97	1,000	Thorium-natural	100
Technetium-97m	100	Thulium-162	1,000
Technetium-98	10	Thulium-166	100
Technetium-99	100	Thulium-167	100
Technetium-99m	1,000	Thulium-170	10
Technetium-101	1,000	Thulium-171	10
Technetium-104	1,000	Thulium-172	100
Tellurium-116	1,000	Thulium-173	100
Tellurium-121	100	Thulium-175	1,000
Tellurium-121m	10	Tin-110	100
Tellurium-123	100	Tin-111	1,000
Tellurium-123m	10	Tin-113	100
Tellurium-125m	10	Tin-117m	100
Tellurium-127	1,000	Tin-119m	100
Tellurium-127m	10	Tin-121	1,000
Tellurium-129	1,000	Tin-121m	100
Tellurium-129m	10	Tin-123	10
Tellurium-131	100	Tin-123m	1,000
Tellurium-131m	10	Tin-125	10
Tellurium-132	10	Tin-126	10
Tellurium-133	1,000	Tin-127	1,000
Tellurium-133m	100	Tin-128	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Titanium-44	1
Titanium-45	1,000
Tungsten-176	1,000
Tungsten-177	1,000
Tungsten-178	1,000
Tungsten-179	1,000
Tungsten-181	1,000
Tungsten-185	100
Tungsten-187	100
Tungsten-188	10
Uranium-230	0.01
Uranium-231	100
Uranium-232	0.001
Uranium-233	0.001
Uranium-234	0.001
Uranium-235	0.001
Uranium-236	0.001
Uranium-237	100
Uranium-238	100
Uranium-239	1,000
Uranium-240	100
Uranium-natural	100
Vanadium-47	1,000
Vanadium-48	100
Vanadium-49	1,000
Xenon-120	1,000
Xenon-121	1,000
Xenon-122	1,000
Xenon-123	1,000
Xenon-125	1,000
Xenon-127	1,000
Xenon-129m	1,000
Xenon-131m	1,000
Xenon-133	1,000
Xenon-133m	1,000
Xenon-135	1,000
Xenon-135m	1,000
Xenon-138	1,000
Ytterbium-162	1,000
Ytterbium-166	100
Ytterbium-167	1,000
Ytterbium-169	100
Ytterbium-175	100
Ytterbium-177	1,000
Ytterbium-178	1,000
Yttrium-86	100
Yttrium-86m	1,000
Yttrium-87	100
Yttrium-88	10
Yttrium-90	10
Yttrium-90m	1,000
Yttrium-91	10
Yttrium-91m	1,000
Yttrium-92	100
Yttrium-93	100
Yttrium-94	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Yttrium-95	1,000
Zinc-62	100
Zinc-63	1,000
Zinc-65	10
Zinc-69	1,000
Zinc-69m	100
Zinc-71m	1,000
Zinc-72	100
Zirconium-86	100
Zirconium-88	10
Zirconium-89	100
Zirconium-93	1
Zirconium-95	10
Zirconium-97	100

Any alpha-emitting radionuclide not listed above or mixtures of alpha-emitters of unknown composition 0.001 Any radionuclide other than alpha-emitting radionuclides not listed above, or mixtures of beta emitters of unknown composition 0.01

Note: For purposes of WAC 246-221-120(8), 246-221-130 (7)(a), and 246-221-240(1) where there is involved a combination of radionuclides in known amounts, the limit for the combination shall be derived as follows: Determine, for each radionuclide in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific radionuclide when not in combination. The sum of such ratios for all radionuclides in the combination may not exceed "1" — that is, unity.

¹ The quantities listed above were derived by taking 1/10th of the most restrictive ALI listed in Table I, Columns 1 and 2, of WAC 246-221-290, rounding to the nearest factor of 10, and constraining the values listed between 37 Bq and 37 MBq (0.001 and 1,000 μ Ci). Values of 3.7 MBq (100 μ Ci) have been assigned for radionuclides having a radioactive half-life in excess of E+9 years, except rhenium, 37 MBq (1,000 μ Ci), to take into account their low specific activity.

* To convert μ Ci to kBq, multiply the μ Ci value by 37.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-300, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-300, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-300, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-24-230, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-230, filed 12/8/80; Order 1095, § 402-24-230, filed 2/6/76; Order 708, § 402-24-230, filed 8/24/72; Order 1, § 402-24-230, filed 7/27/71; Order 1, § 402-24-230, filed 1/8/69; Rules (part), filed 10/26/66.]

Chapter 246-222 WAC

RADIATION PROTECTION—WORKER RIGHTS

WAC

246-222-001	Purpose and scope.
246-222-020	Posting of notices to workers.
246-222-030	Instructions to workers.
246-222-040	Notifications and reports to individuals.
246-222-050	Presence of representatives of licensees or registrants and workers during inspection.
246-222-060	Consultation with workers during inspections.
246-222-070	Requests by workers for inspections.
246-222-080	Inspections not warranted—Informal review.

WAC 246-222-001 Purpose and scope. This chapter establishes requirements for notices, instructions and reports by licensees or registrants to individuals engaged in work under a license or registration and options available to such individuals in connection with department inspections of licensees or registrants to ascertain compliance with the provisions of the act and regulations, orders and licenses issued thereunder regarding radiological working conditions. The regulations in this chapter apply to all persons who receive, possess, use, own or transfer a source of radiation licensed by or registered with the department pursuant to the regulations in chapters 246-224, 246-232, and 246-235 WAC. The definitions contained in WAC 246-220-010 also apply to this chapter.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-010, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-48-010, filed 12/8/80; Order 1084, § 402-48-010, filed 1/14/76.]

WAC 246-222-020 Posting of notices to workers. (1) Each licensee or registrant shall post current copies of the following documents:

(a) The regulations in this chapter and in chapter 246-221 WAC;

(b) The license, conditions or documents incorporated into the license by reference and amendments thereto;

(c) The operating procedures applicable to work under the license or registration;

(d) Any notice of noncompliance involving radiological working conditions, proposed imposition of civil penalty, order issued pursuant to chapter 246-220 WAC, or any response from the licensee or registrant.

(2) If posting of a document specified in subsection (1)(a), (b), or (c) of this section is not practicable, the licensee or registrant may post a notice which describes the document and states where it may be examined.

(3) Each licensee or registrant shall conspicuously post pertinent emergency procedures when emergency procedures are required by the department.

(4) Properly completed department Form RHF-3 "Notice to employees," shall be posted by each licensee or registrant wherever individuals work in or frequent any portion of a restricted area.

(5) Documents, notices or forms posted pursuant to this section shall appear in a sufficient number of places to permit individuals engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered.

(6) Department documents posted pursuant to subsection (1)(d) of this section shall be posted as specified by subsection (5) of this section within five working days after receipt of the documents from the department; the licensee's or registrant's response, if any, shall be posted within five working days after dispatch from the licensee or registrant. Such documents shall remain posted for a minimum of five working days or until action correcting the item(s) of noncompliance has been completed, whichever is later.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-222-020, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-020, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-48-020, filed 12/8/80; Order 1084, § 402-48-020, filed 1/14/76.]

WAC 246-222-030 Instructions to workers. (1) All individuals likely to receive in a year an occupational dose in excess of 1 mSv (100 mrem):

(a) Shall be kept informed of the storage, transfer, or use of sources of radiation in the licensee's or registrant's facility;

(b) Shall be instructed in the health protection considerations for the individual and potential offspring associated with exposure to radiation or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed;

(c) Shall be instructed in, and instructed to observe, to the extent within the worker's control, the applicable provisions of these regulations, department form RHF-3 "Notice to employees," and license conditions for the protection of personnel from exposures to radiation or radioactive material;

(d) Shall be instructed that any worker or representative of workers who believes that a violation of the regulations, license conditions, or unnecessary exposure to radiation exists or occurred, may request an inspection by the department by oral or written notification. The notification shall set forth specific grounds for the complaint. Any such notification to the department is confidential;

(e) Shall be instructed of their right to notify the department if the individual suspects improper actions by a licensee/registrant, or conditions which may lead to a violation of these regulations, the license/registration, or unnecessary exposure to radiation or radioactive materials;

(f) Shall be instructed that employment discrimination by a licensee/registrant against an employee because of actions described in this chapter is prohibited;

(g) Shall be instructed as to their responsibility to report promptly to the licensee or registrant any condition which may constitute, lead to, or cause a violation of the act, these regulations, and licenses or unnecessary exposure to radiation or radioactive material;

(h) Shall be instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive material; and

(i) Shall be advised as to the radiation exposure reports which workers shall be furnished pursuant to WAC 246-222-040.

(2) Records of these instructions described in subsection (1) of this section for all individuals working in, or frequenting any portion of, a restricted area shall be maintained for inspection by the department until further notice. These records shall include a copy of this section, or all the information contained in this section, along with a dated verification signature by the employee stating that the individual has received an explanation of the instructions contained in this section.

(3) In determining those individuals subject to the requirements of subsection (1) of this section, licensees and registrants shall take into consideration assigned activities during normal and abnormal situations involving exposure to sources of radiation which can reasonably be expected to occur during the life of a licensed or registered facility. The extent of these instructions shall be commensurate with potential radiological health protection considerations present in the workplace.

[Statutory Authority: RCW 70.98.050, 99-05-012, § 246-222-030, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-222-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-222-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-222-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-48-030, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-48-030, filed 12/8/80; Order 1084, § 402-48-030, filed 1/14/76.]

WAC 246-222-040 Notifications and reports to individuals. (1) Radiation exposure data for an individual and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual shall be reported to the individual as specified in this section. The information reported shall include data and results obtained pursuant to these regulations, orders, and license conditions, as shown in records maintained by the licensee or registrant pursuant to these regulations. Each notification and report shall:

- (a) Be in writing;
- (b) Include appropriate identifying data such as the name of the licensee or registrant, the name of the individual, and the individual's identification number, preferably Social Security number;
- (c) Include the individual's exposure information; and
- (d) Contain the following statement:

"This report is furnished to you under the provisions of the Washington state department of health, division of radiation protection, rules and regulations for radiation protection. You should preserve this report for further reference."

(2) Each licensee or registrant shall advise each worker annually of the worker's dose as shown in records maintained by the licensee or registrant pursuant to WAC 246-221-090, 246-221-100, and 246-221-230.

(3) At the request of a worker formerly engaged in work controlled by the licensee or the registrant, each licensee or registrant shall furnish to each worker or former worker a report of the worker's dose due to exposure to radiation or radioactive material upon termination. For the purposes of this section, termination means the end of employment with the licensee or the end of a work assignment in the licensee's restricted area(s) in a given calendar quarter without expectation, or specific scheduling, of reentry into such restricted area(s) during the remainder of that calendar quarter. Such report shall be furnished within thirty days from the time the request is made, or within thirty days after the exposure of the individual has been determined by the licensee or registrant, whichever is later; shall cover, within the period of time specified in the request, the dose record for each year in which the

worker's activities involved exposure to radiation from radioactive material licensed by, or radiation machines registered with the department; and shall include the dates and locations of work under the license or registration in which the worker participated during this period.

(4) In addition to the requirements of subsection (3) of this section, at the request of a worker who is terminating employment with the licensee or registrant in work involving radiation exposure, during the current year, each licensee or registrant shall provide at termination to each such worker, or to the worker's designee a written report regarding the radiation dose received by that worker from operations of the licensee or registrant during the current year. If the most recent individual monitoring results are not available at that time, a written estimate of the dose shall be provided together with a clear indication that this is an estimate.

(5) When a licensee or registrant is required pursuant to WAC 246-221-260 to report to the department any exposure of an individual to radiation or radioactive material, the licensee or the registrant shall also provide the individual a written report on the individual's exposure data included therein. Such reports shall be transmitted at a time not later than the transmittal to the department.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-222-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-222-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-222-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-48-040, filed 12/11/86; 83-19-050 (Order 2026), § 402-48-040, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-48-040, filed 12/8/80; Order 1084, § 402-48-040, filed 1/14/76.]

WAC 246-222-050 Presence of representatives of licensees or registrants and workers during inspection. (1) Each licensee or registrant shall afford to the department at all reasonable times opportunity to inspect materials, machines, activities, facilities, premises, and records pursuant to these regulations.

(2) During an inspection, department inspectors may consult privately with workers as specified in WAC 246-222-060. The licensee or registrant may accompany department inspectors during other phases of an inspection.

(3) If, at the time of inspection, an individual has been authorized by the workers to represent them during department inspections, the licensee or registrant shall notify the inspectors of such authorization and shall give the workers' representative an opportunity to accompany the inspectors during the inspection of physical working conditions.

(4) Each workers' representative shall be routinely engaged in work under control of the licensee or registrant and shall have received instructions as specified in WAC 246-222-030.

(5) Different representatives of licensees or registrants and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection. However, only one workers' representative at a time may accompany the inspectors.

(6) With the approval of the licensee or registrant and the workers' representative an individual who is not routinely engaged in work under control of the licensee or registrant,

for example, a consultant to the licensee or registrant or to the workers' representative, shall be afforded the opportunity to accompany department inspectors during the inspection of physical working conditions.

(7) Notwithstanding the other provisions of this section, department inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee or registrant to enter that area.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-050, filed 12/27/90, effective 1/31/91; Order 1084, § 402-48-050, filed 1/14/76.]

WAC 246-222-060 Consultation with workers during inspections. (1) Department inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of department regulations and licenses to the extent the inspectors deem necessary for the conduct of an effective and thorough inspection.

(2) During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which the worker has reason to believe may have contributed to or caused any violation of the act, these regulations, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. Any such notice in writing shall comply with the requirements of WAC 246-222-070(1).

(3) The provisions of subsection (2) of this section shall not be interpreted as authorization to disregard instructions pursuant to WAC 246-222-030.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-060, filed 12/27/90, effective 1/31/91; Order 1084, § 402-48-060, filed 1/14/76.]

WAC 246-222-070 Requests by workers for inspections. (1) Any worker or representative of workers who believes that a violation of the act, of these regulations, or of license conditions exists or has occurred in work under a license or registration with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Washington state department of health, division of radiation protection. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of the workers. A copy shall be provided to the licensee or registrant by the office of radiation protection no later than at the time of inspection except that, upon the request of the worker giving such notice, his or her name and the name of individuals referred to therein shall not appear in such copy or on any record published, released, or made available by the department, except for good cause shown.

[Title 246 WAC—p. 286]

(2) If, upon receipt of such notice, the inspector for the division of radiation protection determines that the complaint meets the requirements set forth in subsection (1) of this section, and that there are reasonable grounds to believe that the alleged violation exists or has occurred, the inspector shall cause an inspection to be made as soon as practicable, to determine if such alleged violation exists or has occurred. Inspections pursuant to this section need not be limited to matters referred to in the complaint.

(3) No licensee or registrant shall discharge or in any manner discriminate against any worker because such worker has filed any complaint or instituted or caused to be instituted any proceeding under these regulations or has testified or is about to testify in any such proceeding or because of the exercise by such worker on behalf of the worker or other workers of any option afforded by this chapter.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-222-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-070, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-070, filed 12/11/86; Order 1084, § 402-48-070, filed 1/14/76.]

WAC 246-222-080 Inspections not warranted—Informal review. (1) If the department of health, division of radiation protection determines, with respect to a complaint under WAC 246-222-070 that an inspection is not warranted because there are no reasonable grounds to believe that a violation exists or has occurred, the division of radiation protection shall notify the complainant in writing of such determination.

(a) If the complaint resulted from activities concerning naturally occurring or accelerator produced radioactive materials and/or radiation producing machines: The complainant may obtain review of such determination by submitting a written statement of position to the Assistant Director, Division of Industrial Safety and Health, P.O. Box 4600, Olympia, Washington 98504-4600. Such request for informal review will be processed according to the provisions of WAC 296-350-460 and the provisions of the interagency agreement between the department of labor and industries and the department of health, division of radiation protection, if any.

(b) If the complaint resulted from activities concerning byproduct material, source material, and/or special nuclear material: The complainant may obtain review of such determination by submitting a written statement of position with the Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827 (360 236-3300), who will provide the licensee or registrant with a copy of such statement by certified mail, excluding, at the request of the complainant, the name of the complainant. The licensee or registrant may submit an opposing written statement of position with the department of health, division of radiation protection, who will provide the complainant with a copy of such statement by certified mail. Upon the request of the complainant, the department of health may hold an informal conference in which the complainant and the licensee or registrant may orally present their views. An informal conference may also be held at the request of the licensee or registrant, but disclosure of the identity of the complainant will be

(2003 Ed.)

made only following receipt of written authorization from the complainant. After considering all written or oral views presented, the department of health shall affirm, modify, or reverse the determination of the division of radiation protection and furnish the complainant and the licensee or registrant a written notification of the decision and the reason therefor.

(2) If the division of radiation protection determines that an inspection is not warranted because the requirements of WAC 246-222-070(1) have not been met, it shall notify the complainant in writing of such determination. Such determination shall be without prejudice to the filing of a new complaint meeting the requirements of WAC 246-222-070(1).

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-222-080, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-222-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-080, filed 12/11/86; Order 1084, § 402-48-080, filed 1/14/76.]

Chapter 246-224 WAC

RADIATION PROTECTION—RADIATION MACHINE ASSEMBLY AND REGISTRATION

WAC

246-224-0001	Purpose.
246-224-0010	Definitions.
246-224-0020	Who must register a radiation machine?
246-224-0030	Are there any radiation machines within Washington state that do not have to be registered?
246-224-0040	What if we have separate locations with radiation machines?
246-224-0050	When and how do I register?
246-224-0060	Are there other requirements besides registration?
246-224-0070	When and how do I report changes to my registration?
246-224-0080	When and how do I renew my registration?
246-224-0090	What are my obligations if I close my facility or get rid of a machine?
246-224-0100	What are the responsibilities of the x-ray agent?
246-224-0110	What if I want to bring a radiation machine into Washington state for temporary use from out-of-state?
246-224-0120	What happens if I do not register my radiation machine?

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-224-001	Purpose and scope. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-001, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-210, filed 12/8/80; Order 1084, § 402-16-210, filed 1/14/76. Formerly WAC 402-16-010.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-010	Exemptions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-010, filed 12/27/90, effective 1/31/91; Order 1084, § 402-16-220, filed 1/14/76. Formerly WAC 402-16-100.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-020	Application for registration of radiation machine facilities. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-020, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-230, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-230, filed 12/8/80; Order 1084, § 402-16-230, filed 1/14/76. Formerly WAC 402-16-020 and 402-16-040.] Repealed by

246-224-030	02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080. Issuance of certificate of registration. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-232, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-232, filed 12/8/80.] Repealed by 94-01-073, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050.
246-224-040	Expiration of registration. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-224-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-040, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-234, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-234, filed 12/8/80.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-224-050	Renewal of registration. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-224-050, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-238, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-238, filed 12/8/80.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-060	Separate locations. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-060, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-240, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-240, filed 12/8/80; Order 1084, § 402-16-240, filed 1/14/76. Formerly WAC 402-16-050.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-070	Report of changes. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-224-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-070, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-250, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-250, filed 12/8/80; Order 1084, § 402-16-250, filed 1/14/76. Formerly WAC 402-16-060.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-080	Approval not implied. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-080, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-080, filed 12/27/90, effective 1/31/91; Order 1084, § 402-16-260, filed 1/14/76. Formerly WAC 402-16-070.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-224-090	Repair person, assembler, or installer obligation. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-090, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-16-270, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-270, filed 12/8/80; Order 1084, § 402-16-270, filed 1/14/76. Formerly WAC 402-

16-090.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.

246-224-100

Out-of-state radiation machines. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-100, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-280, filed 12/8/80; Order 1084, § 402-16-280, filed 1/14/76. Formerly WAC 402-16-110.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.

WAC 246-224-0001 Purpose. The purpose of this chapter is to regulate sources of ionizing radiation as required by RCW 70.98.050 and 70.98.080. This chapter provides for the registration of all radiation machines installed, manufactured, tested, used, or located in Washington state.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0001, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0010 Definitions. "Agent" means a person, company, or dealer; which assembles, installs, repairs, sells, or leases x-ray machines.

"Department" means the department of health.

"Facility" means the location at which one or more radiation machines are installed, manufactured, tested, or used within one building, vehicle, or in one physical complex.

"FDA" means the United States Food and Drug Administration.

"Radiation" means, for the purposes of this chapter, ionizing radiation, including x-ray, electron beam, and other machine produced particulate radiation.

"Radiation machine" means, for purposes of this chapter, a device that, when operated, produces x-ray or electron radiation, in a prescribed manner, with defined characteristics, techniques, or parameters. It does not include devices with radioactive material as the only source of radiation.

"Registrant" means the owner or controller of the radiation machine who is responsible for the safe operation of the radiation machine.

"Registration" means providing required information and continuing contact with the department.

"Storage" means the status of a radiation machine that is approved by the department as being unable to produce radiation without substantial effort at set-up, reassembly, or reinstallation. For facilities with a radiation control authority, (e.g., radiation safety office) a locking or disabling procedure may serve to provide this status.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0010, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0020 Who must register a radiation machine? Any x-ray facility within Washington state must register with the department.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0020, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0030 Are there any radiation machines within Washington state that do not have to be registered? Machines do not need to be registered when:

[Title 246 WAC—p. 288]

(1) Electronic equipment (including television receivers) produces incidental x rays provided that the dose equivalent rate does not exceed 5 μ Sv/hr (0.5 mrem/hr) at 5 cm from any accessible equipment surface averaged over an area of 10 square centimeters;

(2) Radiation machines are in transit;

(3) Radiation machines are held for sale or lease by x-ray agents; or

(4) The department allows an exemption.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0030, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0040 What if we have separate locations with radiation machines? (1) Geographically separate facilities must register separately even if these separate facilities are under one administrative control (e.g., several satellite clinics operated by one health care institution).

(2) Each facility must designate a contact person.

(3) If machines are routinely moved between or among separate facilities, indicate this when registering.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0040, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0050 When and how do I register? (1) You must register with the department within fifteen calendar days of initial use. You may also register anytime before initial use.

(2) Registration is valid for one year from the department approval date.

(3) You must provide, at a minimum, the:

(a) Owner name;

(b) Profession and credential of user/registrator;

(c) Official contact person;

(d) Site address and phone number;

(e) Mailing address and phone number (if different from facility);

(f) Total number and type of radiation machines (tubes) at the facility;

(g) Installation date(s);

(h) Seller/installer name; and

(i) Name of former agent and address of former facility from which the machines were transferred or sold.

(4) Pay applicable registration fees according to WAC 246-254-053, Radiation machine facility registration fees.

(5) Submit registration information and applicable fees to:

Department of Health
Revenue Section
P.O. Box 1099
Olympia, WA 98507-1099
360-236-3230 or 1-800-299-XRAY

Note: For division of radiation protection information, visit the following website:
<http://www.doh.wa.gov/ehp/rp/Default.htm>.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0050, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0060 Are there other requirements besides registration? All registrants must:

(1) Follow applicable standards according to chapter 246-225 WAC, Radiation protection—X-rays in the healing arts; chapter 246-227 WAC, Radiation protection—Industrial x-ray; chapter 246-228 WAC, Radiation protection—Analytical x-ray equipment; and chapter 246-229 WAC, Radiation protection—Particle accelerators;

(2) Meet general radiation protection rules and standards according to chapter 246-220 WAC, Radiation protection—General provisions; chapter 246-221 WAC, Radiation protection standards; chapter 246-222 WAC, Radiation protection—Worker rights; and

(3) Pay applicable fees for radiation machine use according to WAC 246-254-053, Radiation machine facility registration fees.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0060, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0070 When and how do I report changes to my registration? (1) You must notify the department within thirty days of any change to your registration information.

(2) Submit registration changes to:

Department of Health
X-Ray Control Section
P.O. Box 47827

Olympia, WA 98504-7827

360-236-3230 or 1-800-299-XXRAY

(3) You may notify the department of changes on the registration renewal notice if timely.

Note: For division of radiation protection information, visit the following website:
<http://www.doh.wa.gov/ehp/rp/Default.htm>.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0070, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0080 When and how do I renew my registration? (1) You must renew your registration annually.

(2) You must submit renewal information and the applicable registration fee as specified in WAC 246-254-053 at least thirty calendar days prior to your registration expiration date. The department provides notice of fees and current registration information ninety days prior to the registration expiration date, and anytime upon request.

(3) If registration is overdue, late fees apply according to WAC 246-254-053, Radiation machine facility registration fees.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0080, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0090 What are my obligations if I close my facility or get rid of a machine? (1) You must notify the department of the machine status within thirty days of closure or removal.

(2) If the machine is disposed of or transferred within Washington state, you must provide:

- (a) The name and contact information of the recipient;
- (b) The address of the recipient; and
- (c) The date of the disposal or transfer.

(3) If the machine is to be placed in storage and retained, contact the department for approval.

(2003 Ed.)

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0090, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0100 What are the responsibilities of the x-ray agent? (1) Within fifteen calendar days, any agent who sells, leases, transfers, lends, disposes of, assembles, repairs, replaces, or installs radiation machines or components in Washington state must notify the department of the:

- (a) Recipient's name and facility address;
- (b) Manufacturer, model, and serial number of each radiation machine master control; and
- (c) Date of transfer of the radiation machine.

Note: An FDA form 2579 or equivalent may be used for this notification requirement.

(2) Any agent who installs x-ray systems, controls, or components must ensure that machines, accessories, or components (including exposure switch placement) meet the applicable requirements of chapter 246-225 WAC, Radiation protection—X-rays in the healing arts; chapter 246-227 WAC, Radiation protection—Industrial x-ray; chapter 246-228 WAC, Radiation protection—Analytical x-ray equipment; and chapter 246-229 WAC, Radiation protection—Particle accelerators.

(3) Agents shall not install or transfer a radiation machine if the registrant does not complete:

(a) A required plan review according to chapter 246-225 WAC, Radiation protection—X-rays in the healing arts or chapter 246-227 WAC, Radiation protection—Industrial radiography; or

(b) Shielding and/or required design construction.

(4) Agents must assemble certified x-ray systems according to 21 CFR, subchapter J so that manufacturer's specifications and intended performance designs are met.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0100, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0110 What if I want to bring a radiation machine into Washington state for temporary use from out-of-state? (1) Notify the department at least three business days prior to in-state use when bringing an x-ray machine into the state for any temporary use. The department may waive the time requirement upon hardship request by the owner. Notification to the department includes, at a minimum, the:

- (a) Type of radiation machine;
- (b) Nature, duration, and scope of use; and
- (c) Exact location where the radiation machine is to be used.

(2) All machines and assemblies must comply with all applicable regulations.

(3) Any medical or dental use radiation (e.g., x-ray) machines within the state must register with the department according to WAC 246-224-0020.

(4) For radiation (e.g., x-ray) machines not intended for patient diagnosis and treatment, you must register the machine if it is used for more than sixty calendar days. Registration is waived for sixty or fewer calendar days per year.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0110, filed 6/27/02, effective 7/28/02.]

[Title 246 WAC—p. 289]

WAC 246-224-0120 What happens if I do not register my radiation machine? You must pay a late fee plus registration fees due for the period of time the machine has been in operation and not registered according to WAC 246-254-053, Radiation machine facility registration fees.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0120, filed 6/27/02, effective 7/28/02.]

Chapter 246-225 WAC

RADIATION PROTECTION—X-RAYS IN THE HEALING ARTS

WAC

246-225-001	Purpose and scope.
246-225-010	Definitions.
246-225-020	General requirements—Administrative controls.
246-225-030	General requirements—Plan review.
246-225-040	General requirements for diagnostic x-ray systems.
246-225-050	Fluoroscopic x-ray systems.
246-225-060	Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Beam limitation.
246-225-070	Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Radiation exposure control devices.
246-225-080	Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Source-to-skin or receptor distance.
246-225-090	Radiographic systems other than fluoroscopic and dental intraoral—Exposure reproducibility.
246-225-100	Radiographic systems—Standby radiation from capacitor energy storage equipment.
246-225-110	Intraoral dental radiographic systems.
246-225-120	Therapeutic x-ray installations less than 1 MeV.
246-225-130	X-ray and electron therapy systems with energies of one MeV and above.
246-225-140	Veterinary medicine radiographic installations.
246-225-150	X-ray film developing requirements.
246-225-160	Mammography.
246-225-99920	Appendix II—Determination of competency.
246-225-99930	Appendix III—Information to be submitted by persons proposing to conduct healing arts screening using ionizing radiation.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-225-99910	Appendix I—Good practices. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-99910, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-99910, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-99910, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-99001, filed 9/16/83; Order 1084, Appendix D (codified as WAC 402-28-99001), filed 1/14/76.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
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WAC 246-225-001 Purpose and scope. This chapter establishes requirements, for which a registrant is responsible, for use of x-ray equipment by or under the supervision of an individual authorized by and licensed in accordance with state statutes to engage in the healing arts. The provisions of this chapter are in addition to, and not in substitution for, other applicable provisions of these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-010, filed 12/8/80; Order 1084, § 402-28-010, filed 1/14/76; Order 1, § 402-28-101 (codified as WAC 402-28-010), filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-010 Definitions. As used in this chapter, the following definitions apply:

(1) "Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

(2) "Accidental radiation exposure incident" means an exposure to a patient, an operator, or a member of the public that was unintentional.

(3) "Added filter" means the filter added to the inherent filtration.

(4) "Aluminum equivalent" means the thickness of aluminum (type 1100 alloy) affording the same attenuation, under specified conditions, as the material in question. (The nominal chemical composition of type 1100 aluminum alloy is 99.00 percent minimum aluminum, 0.12 percent copper.)

(5) "Assembler" means any person engaged in the business of assembling, replacing, or installing one or more components into an x-ray system or subsystem. An assembler may be the practitioner, his/her employee, an outside contractor, or an employee of an outside firm.

(6) "Attenuation block" means a block or stack, having dimensions 20 cm by 20 cm by 3.8 cm, of type 1100 aluminum alloy or other aluminum alloys having equivalent attenuation.

(7) "Automatic exposure control" means a device which automatically controls one or more technique factors in order to obtain at a preselected location(s) a required quantity of radiation (see also "phototimer").

(8) "Barrier" (see "protective barrier").

(9) "Beam axis" means a line from the source through the centers of the x-ray fields.

(10) "Beam-limiting device" means a device which provides a means to restrict the dimensions of the x-ray field.

(11) "Beam monitoring system" means a system designed to detect and measure the radiation present in the useful beam.

(12) "C-arm x-ray system" means an x-ray system in which the image receptor and x-ray tube housing assembly are connected by a common mechanical support system in order to maintain a desired spatial relationship. This system is designed to allow a change in the projection of the beam through the patient without a change in the position of the patient.

(13) "Cephalometric device" means a device intended for the radiographic visualization and measurement of the dimensions of the human head.

(14) "Certified components" means components of x-ray systems which have been certified by the manufacturer as meeting the requirements of the federal performance standard for x-ray equipment.

(15) "Certified system" means any x-ray system which has one or more certified component(s).

(16) "Changeable filters" means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical or physical process.

(17) "Coefficient of variation (C)" means the ratio of the standard deviation to the mean value of a population of observations. It is estimated using the following equation:

$$c = \frac{s}{\bar{X}} = \frac{1}{\bar{X}} \left[\sum_{i=1}^n \frac{(X_i - \bar{X})^2}{n-1} \right]^{1/2}$$

where

s = Estimated standard deviation of the population.

\bar{X} = Mean value of observations in sample.

$X(i)$ = i^{th} observation sampled.

n = Number of observations in sample.

(18) "Contact therapy system" means an x-ray system wherein the x-ray tube port is put in contact with or within 5 centimeters of, the surface being treated.

(19) "Control panel" means that part of the x-ray control upon which are mounted the switches, knobs, pushbuttons, and other hardware necessary for manually setting the technique factors.

(20) "Cooling curve" means the graphical relationship between heat units stored and cooling time.

(21) "Date of transfer." See installation date.

(22) "Dead-man switch" means a switch so constructed that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.

(23) "Department" means the department of health which has been designated as the state radiation control agency.

(24) "Detector" (see "radiation detector").

(25) "Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.

(26) "Diagnostic x-ray system" means an x-ray system designed for irradiation of any part of the human or animal body for the purpose of recording or visualization for diagnostic purposes.

(27) "Direct scattered radiation" means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam (see also "scattered radiation").

(28) "Electronic product defect" means an error in design, manufacture, or performance of an x-ray system such that unintentional radiation exposure to a patient, an operator, or a member of the public has occurred.

(29) "Entrance exposure rate" means the exposure measured free-in-air per unit time where the useful beam enters the patient.

(30) "Equipment" (see "x-ray equipment").

(31) *"Exposure" means the quotient of dQ divided by dm where dQ is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass dm are completely stopped in air. (The special unit of exposure is the roentgen.)

Note: *When the word, exposure, is used in this part to mean one or more irradiations of a person for a healing arts purpose, or in a more general sense, it will not be underlined.

(32) "Field emission equipment" means equipment which uses an x-ray tube in which electron emission from the cathode is due solely to the action of an electric field.

(33) "Filter" means material placed in the useful beam to absorb preferentially selected radiations.

(34) "Fluoroscopic imaging assembly" means a component which comprises a reception system in which x-ray photons produce a fluoroscopic image. It includes equipment housings, electrical interlocks if any, the primary protective barrier, and structural material providing linkage between the image receptor and the diagnostic source assembly.

(35) "Focal spot" means the area on the anode of the x-ray tube bombarded by the electrons accelerated from the cathode, and from which the useful beam originates.

(36) "Full beam detector" means a radiation detector of such size that the total cross section of the maximum size useful beam is intercepted.

(37) "General purpose radiographic x-ray system" means any radiographic x-ray system which, by design, is not limited to radiographic examination of specific anatomical regions.

(38) "Gonad shield" means a protective barrier for the testes or ovaries.

(39) "Half-value layer (HVL)" means the thickness of specified material which attenuates the beam of radiation to an extent such that the exposure rate is reduced to one-half of its original value. In this definition the contribution of all scattered radiation, other than any which might be present initially in the beam concerned, is deemed to be excluded.

(40) "Healing arts screening" means the testing of an asymptomatic population using x-ray machines for the detection or evaluation of health indications when such tests are not specifically and individually ordered by a licensed practitioner of the healing arts legally authorized to prescribe such x-ray tests for the purpose of diagnosis or treatment.

(41) "Heat unit" means a unit of energy equal to the product of the peak kilovoltage, milliamperes, and seconds, i.e., kVp x mA x second.

(42) "Image intensifier" means a device consisting of an image intensifier tube installed in its housing which instantaneously converts an x-ray pattern into a light image of higher energy density.

(43) "Image receptor" means any device, such as a fluorescent screen or radiographic film, which transforms incident x-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.

(44) "Image receptor support" means that part of a mammographic system designed to support the image receptor in a plane perpendicular to the x-ray beam during mammography.

(45) "Inherent filtration" means the filtration of the useful beam provided by the permanently installed components of the tube housing assembly.

(46) "Installation date" means the earliest date that a machine, accessory, or component is able to be used by a registrant or transferee but no later than the date of the first human exposure made using the machine, accessory, or component that has been installed.

(47) "Interlock" means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

(48) "Irradiation" means the exposure of matter to ionizing radiation.

(49) "Kilovolts peak (kVp)" (see "peak tube potential").

(50) "kV" means kilovolts.

(51) "kWs" means kilowatt second which is equal to the product of peak kilovolts, amperes, and seconds or $10^{-3} \text{ X kV X mA X sec}$.

(52) "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

(53) "Leakage radiation" means radiation emanating from the diagnostic or therapeutic source assembly except for:

(a) The useful beam and

(b) Radiation produced when the exposure switch or timer is not activated.

(54) "Leakage technique factors" means the technique factors associated with the tube housing assembly which are used in measuring leakage radiation. They are defined as follows:

(a) For capacitor energy storage equipment, the maximum rated peak tube potential and the maximum rated number of exposures in an hour for operation at the maximum rated peak tube potential with the quantity of charge per exposure being 10 milliampere seconds, or the minimum obtainable from the unit, whichever is larger.

(b) For field emission equipment rated for pulsed operation, the maximum rated peak tube potential and the maximum rated number of x-ray pulses in an hour for operation at the maximum rated peak tube potential.

(c) For all other equipment, the maximum rated peak tube potential and the maximum rated continuous tube current for the maximum rated peak tube potential.

(55) "Light field" means that area of the intersection of the light beam from the beam-limiting device and one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the illumination is one-fourth of the maximum in the intersection.

(56) "Line-voltage regulation" means the difference between the no-load and the load line potentials expressed as a percent of the load line potential; that is,

$$\text{Percent line-voltage regulation} = 100 (V_n - V_l) / V_l$$

where:

V_n = No-load line potential

V_l = Load line potential

(57) "mA" means tube current in milliamperes.

(58) "mAs" means milliampere second or the product of the tube current in milliamperes and the time of exposure in seconds.

(59) "Maximum line current" means the root mean squared current in the supply line of an x-ray machine operating at its maximum rating.

(60) "Mobile equipment" (see "x-ray equipment").

(61) "Modified installation" means a room, building, office, or facility in which structural parameters which affect radiation safety are being changed; these parameters include such things as reconstruction or moving of walls, replacement of the x-ray machine with one of higher kVp or mA, a change in the direction of the beam, replacement of the control panel so that operator protection is adversely affected, a change in occupancy of adjacent areas, workload changes, etc.

(62) "New installation" means a room, building, office, or facility newly built, or in which previously there has been no radiation machine.

(63) "Peak tube potential" means the maximum value of the potential difference across the x-ray tube during an exposure.

(64) "Phantom" means a volume of material similar to tissue with respect to attenuation and scattering of x-ray photons. This requires that the atomic number (Z) and the density of the material be similar to those of tissue.

(65) "Phototimer" - means a device which controls radiation exposure to the image receptor by detecting the total amount of radiation reaching the device. The radiation monitoring device(s) is part of an electronic circuit which controls the time the tube is activated (see also "automatic exposure control").

(66) "Portable equipment" (see "x-ray equipment").

(67) "Position indicating device (PID)" means a device, on dental x-ray equipment which indicate the beam position and establishes a definite source-surface (skin) distance. The device may or may not incorporate or serve as a beam-limiting device.

(68) "Positive beam limitation" means the automatic or semi-automatic adjustment of an x-ray beam to the selected image receptor size, whereby exposures cannot be made without such adjustment.

(69) "Primary protective barrier" (see "protective barrier").

(70) "Protected area" means a shielded area in which attenuation of x-radiation is sufficient to meet the exposure limits of WAC 246-221-010 and the principles of WAC 246-220-007 and "ALARA" for individuals in that area.

(71) "Protective apron" means an apron made of radiation absorbing materials, used to reduce radiation exposure.

(72) "Protective barrier" means a barrier of radiation absorbing material(s) used to reduce radiation exposure.

(a) "Primary protective barrier" means the material, excluding filters, placed in the useful beam, to protect anyone other than the patient from radiation exposure.

(b) "Secondary protective barrier" means a barrier sufficient to attenuate the stray radiation to the required degree.

(73) "Protective glove" means a glove made of radiation absorbing materials used to reduce radiation exposure.

(74) "Quality assurance" is a program designed to produce high quality radiographs at minimal cost and minimal patient exposure.

(75) "Quality control" is the routine measurement of the performance of the diagnostic x-ray imaging system, from x-ray beam output to the viewing of radiographs, and the con-

tinual adjustment of that performance to an optimal and consistent level.

(76) "Radiation detector" means a device which in the presence of radiation provides by either direct or indirect means, a signal or other information suitable for use in measuring one or more quantities of incident radiation.

(77) "Radiation safety" means efforts directed at occupational exposure reduction, patient exposure reduction, image quality improvement, diagnostic imaging system quality assurance, radiation measurements, dose evaluations, compliance with state and federal regulations, and related issues.

(78) "Radiation therapy simulation system" means a fluoroscopic or radiographic x-ray system intended for localizing the volume to be exposed during radiation therapy and confirming the position and size of the therapeutic irradiation field.

(79) "Radiograph" means an image receptor on which the image is created directly or indirectly by an x-ray pattern and results in a permanent record.

(80) "Radiographic imaging system" means any system whereby a permanent or temporary image is recorded on an image receptor by the action of ionizing radiation.

(81) "Rating" means the operating limits of an x-ray system or subsystem as specified by the component manufacturer.

(82) "Recording" means producing a permanent form of an image resulting from x-ray photons (e.g., film, video tape).

(83) "Response time" means the time required for an instrument system to reach 90 percent of its final reading when the radiation-sensitive volume of the instrument system is exposed to a step change in radiation flux from zero sufficient to provide a steady state midscale reading.

(84) "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction (see also "direct scattered radiation").

(85) "Secondary protective barrier" (see "protective barrier").

(86) "Shutter" means a device attached to the tube housing assembly which can totally intercept the entire cross sectional area of the useful beam and which has a lead equivalency at least that of the tube housing assembly.

(87) "SID" (see "source-image receptor distance").

(88) "Source" means the focal spot of the x-ray tube.

(89) "Source-image receptor distance (SID)" means the distance from the source to the center of the input surface of the image receptor.

(90) "Source-to-skin-distance (SSD)" means the distance between the source and the skin entrance plane of the patient.

(91) "Special purpose x-ray equipment" means that which is designed for radiographic examination of one specific area of the body.

(92) "Spot check" means an abbreviated calibration procedure which is performed to assure that a previous calibration continues to be valid.

(93) "Spot film device" means a device intended to transport and/or position a radiographic image receptor between the x-ray source and fluoroscopic image receptor, including a device intended to hold a cassette over the input end of an image intensifier for the purpose of making a radiograph.

(94) "Spot film" means a radiograph which is made during a fluoroscopic examination to record permanently conditions which exist during that fluoroscopic procedure.

(95) "Stationary equipment" (see "x-ray equipment").

(96) "Stray radiation" means the sum of leakage and scattered radiation.

(97) "Technique factors" means the conditions of operation. They are specified as follows:

(a) For capacitor energy storage equipment, peak tube potential in kV and quantity of charge in mAs.

(b) For field emission equipment rated for pulsed operation, peak tube potential in kV and number of x-ray pulses.

(c) For all other equipment, peak tube potential in kV and:

(i) Either tube current in mA and exposure time in seconds,

(ii) Or the product of tube current and exposure time in mAs.

(98) "Transmission detector" means a radiation detector through which the useful beam or part of the useful beam passes.

(99) "Treatment volume" means the region, in the patient, to which a specified dose is to be delivered.

(100) "Tube" means an x-ray tube, unless otherwise specified.

(101) "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage and/or filament transformers and other appropriate elements when they are contained within the tube housing.

(102) "Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.

(103) "Useful beam" means the radiation which passes through the tube housing port and the aperture of the beam-limiting device when the exposure switch or timer is activated.

(104) "Variable-aperture beam-limiting device" means a beam-limiting device which has capacity for stepless adjustment of the x-ray field size.

(105) "Visible area" means that portion of the input surface of the image receptor over which incident x-ray photons produce a visible image.

(106) "Wedge filter" means an added filter with changing radio-opacities used to achieve more uniform optical densities on the image receptor when a body part of varying absorption characteristics is radiographed.

(107) "X-ray control" means a device which controls input power to the x-ray high-voltage generator and/or the x-ray tube. It includes equipment which controls the technique factors of an x-ray exposure.

(108) "X-ray equipment" means an x-ray system, subsystem, or component thereof. Types of x-ray equipment are as follows:

(a) 'Mobile' means x-ray equipment mounted on a permanent base with wheels and/or casters for moving while completely assembled.

(b) 'Portable' means x-ray equipment designed to be hand-carried.

(c) 'Stationary' means x-ray equipment which is installed in a fixed location.

(109) "X-ray field" means that area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the exposure rate is one-fourth of the maximum in the intersection.

(110) "X-ray high-voltage generator" means a device which transforms electrical energy from the potential supplied by the x-ray control to the tube operating potential. The device may also include means for transforming alternating current to direct current, filament transformers for the x-ray tube(s), high-voltage switches, electrical protective devices, and other appropriate elements.

(111) "X-ray system" means an assemblage of components for the controlled production of x-rays. It includes minimally an x-ray high-voltage generator, an x-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.

(112) "X-ray subsystem" means any combination of two or more components of an x-ray system for which there are requirements specified in this part.

(113) "X-ray tube" means any electron tube which is designed to be used primarily for the production of x-rays.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-010, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-020, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-020, filed 12/8/80; Order 1084, § 402-28-020, filed 1/14/76; Order 1, § 402-28-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-020 General requirements—Administrative controls. (1) No person shall make, sell, lease, transfer, lend, or install x-ray equipment or the accessories used in connection with such equipment unless such accessories and equipment, when properly placed in operation and properly used, shall meet the requirements of this chapter.

(2) The registrant in control of the x-ray machines shall be responsible for directing the operation of the x-ray machines. The registrant or registrant's agent shall assure the following provisions are met in the operation of the x-ray machine or machines:

(a) The registrant shall not operate an x-ray machine for diagnostic or therapeutic purposes when the x-ray machine:

- (i) Does not meet the provisions of this chapter; or
- (ii) Is malfunctioning and threatens the health or safety of the patient, operator, or general public.

(b) X-ray machine operator requirements.

(i) Individuals operating the x-ray equipment shall be adequately instructed in safe operating procedures and shall be able to demonstrate competence, upon request from the department, in the correct use of the equipment. Required areas of competence are listed in Appendix II. The department may determine compliance with subsection (2)(b) of this section by observation, interview, or testing;

(ii) A medical x-ray machine operator shall be licensed, certified or registered by the department as either:

(A) A health care practitioner, licensed under Title 18 RCW; or

(B) A diagnostic or therapeutic radiologic technologist certified in accordance with chapter 18.84 RCW; or

(C) An x-ray technician registered in accordance with chapter 18.84 RCW.

(c) At each x-ray system's control panel, a chart shall be provided which specifies for the examinations performed by that system the following information:

(i) Patient's anatomical size versus technique factors utilized;

(ii) Source to image receptor distance used;

(iii) Type and placement of patient shielding used, for example, gonad, thyroid, lap apron;

(iv) If applicable, settings for automatic exposure devices; and

(v) Type and size of film or screen-film combination to be used.

(d) When required by the department, a registrant shall create and provide to operators of the x-ray system, radiation safety procedures which address patient and occupationally-exposed personnel safety. These procedures shall define restrictions of the operating technique required for safe operation of the particular x-ray system;

(e) Except for patients who cannot be moved out of the room and the patient being examined, only the staff and ancillary personnel required for the medical procedure or training shall be present in the room during the radiographic exposure. Other than the patient being examined:

(i) All individuals shall be positioned such that no part of the body including the extremities not protected by 0.5 mm lead equivalent will be struck by the useful beam;

(ii) The x-ray operator, other staff and ancillary personnel shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent;

(iii) Patients who cannot be removed from the room shall be:

(A) Protected from the direct scatter radiation by whole body protective barriers of not less than 0.25 mm lead equivalent; or

(B) Positioned so the nearest portion of the body is at least 2 meters from both the tube head and the nearest edge of the image receptor.

(iv) The department may require additional protective devices when a portion of the body of staff or ancillary personnel is potentially subjected to stray radiation which may result in that individual receiving one quarter of the maximum permissible dose defined under WAC 246-221-010.

(f) Gonad shielding of not less than 0.5 mm lead equivalent shall be used for patients of reproductive age during radiographic procedures in which the gonads are in the direct (useful) beam, except for cases when gonad shielding may interfere with the diagnostic procedure;

(g) Persons shall not be exposed to the useful beam except for healing arts purposes. Only a licensed practitioner of the healing arts shall authorize an exposure to the useful beam. This requirement prohibits deliberate exposure for the following purposes:

(i) Exposure of an individual for training, demonstration, or other purposes unless there are also healing arts requirements and proper prescription is provided;

(ii) Except for mammography performed by registered facilities on self-referred patients, the exposure of an individual for the purpose of healing arts screening without prior written approval of the state health officer; and

(iii) Exposure of an individual for the sole purpose of satisfying a third party's prerequisite for reimbursement under any health care plan, except for exposure required under Medicare provisions.

(h) When a patient or film must be provided with auxiliary support during a radiation exposure:

(i) Mechanical holding devices shall be used when the technique permits. The safety rules, when required under subdivision (d) of this subsection, shall list individual projections where holding devices cannot be utilized;

(ii) Written safety procedures, when required under subdivision (d) of this subsection, shall indicate the requirements for selecting a human holder and the procedure the holder shall follow;

(iii) The human holder shall be protected as required under subdivision (e)(i) of this subsection;

(iv) No person shall be used routinely to hold film or patients;

(v) When the patient must hold the film, the portion of the body other than the area of clinical interest struck by the useful beam shall be protected by not less than 0.5 mm lead equivalent material;

(vi) Holding the film or the patient shall be permitted only in very unusual and rare situations.

(i) Personnel dosimetry. All persons associated with the operation of an x-ray system are subject to both the occupational exposure limits and the requirements for the determination of the doses stated under WAC 246-221-020. In addition, when protective clothing or devices are worn on portions of the body and a dosimeter is required, at least one such dosimeter shall be utilized as follows:

(i) When an apron is worn, the monitoring device shall be worn at the collar outside of the apron; and

(ii) The dose to the whole body based on the maximum dose attributed to the most critical organ shall be recorded on the reports required under WAC 246-221-230. If more than one device is used or a record is made of the data, each dose shall be identified with the area where the device was worn on the body.

(iii) Personnel monitoring of an operator shall be required where:

(A) Exposure switch cords are utilized that allow the operator to stand in an unprotected area during exposures; and

(B) Measurements by the department show ten percent of the exposure limits as specified under WAC 246-221-010 may be exceeded.

(iv) All persons involved in the operation of a fluoroscope and working within the fluoroscopy room during its operation shall wear a personnel dosimeter required under WAC 246-221-090 and subsection (2)(i)(i) of this section. If extremities are in or near the primary beam, extremity dosimeters are also required;

(j) Healing arts screening utilizing radiation. Any person proposing to conduct a healing arts screening program, with the exception of a mammography program, shall not initiate

such a program without prior approval of the state health officer. When requesting such approval, that person shall submit the information outlined under Appendix III of this part. If information submitted becomes invalid or outdated, the state health officer shall be notified immediately;

(k) When using scatter suppressing grids, the grids shall be:

(i) Clearly labelled with the focal distance for which they are designed to be used; and

(ii) Of the proper focal distance for the source-to-image distances used.

(l) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized.

(i) Film cassettes without intensifying screens shall not be used for any routine diagnostic radiological imaging.

(ii) Portable or mobile x-ray equipment shall be used only for examinations where it is impractical to transfer the patient(s) to a stationary x-ray installation.

(m) Patient log. A medical x-ray facility (chiropractors, allopathic and osteopathic physicians and hospitals only) shall record for each x-ray diagnosis or treatment the patient's name, type of x-ray procedures performed, and the date. A separate log is not necessary if the required information is retrievable by reference to other records.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-225-020, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-020, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-031, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-031, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-031, filed 12/8/80; Order 1084, § 402-28-031, filed 1/14/76. Formerly WAC 402-28-030 (part).]

WAC 246-225-030 General requirements—Plan review. (1) Before construction, the floor plans and equipment arrangement of medical installations (new or modifications of existing installations) utilizing x-rays for diagnostic or therapeutic purposes shall be submitted to:

(a) A qualified expert for determination of shielding requirements using National Council on Radiation Protection and Measurements Report No. 49, or equivalent; and

(b) The department for subsequent review.

Review shall not imply approval.

(2) The review of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose in excess of the limits required under WAC 246-221-010, 246-221-050, and 246-221-060.

(3) Diagnostic veterinary, podiatric, and dental facilities shall be exempt from submitting shielding calculations and floor plans.

(4) In order for the department to provide an evaluation, technical advice, and official review of the shielding requirements for a medical radiation installation, a floor plan drawn to scale and the following data are required:

(a) The normal location of the x-ray tube, along with an indication of anode-cathode orientation to the cassette holders;

- (b) The limits of the tube travel;
- (c) The directions in which the tube is pointed;
- (d) Window locations;
- (e) The location of the control booth or operator's position;
- (f) The exposure switch location;
- (g) The position of the viewing window, if any;
- (h) The composition and thickness of the walls;
- (i) If more than one story, the height floor-to-floor;
- (j) If more than one story, the composition and thickness of materials in the ceiling or floor;
- (k) The make and model of the x-ray machine;
- (l) The maximum kVp and mA;
- (m) The types of examinations or treatments (for example, chest, spine, general x-ray, or therapy);
- (n) The identification and occupancy of areas adjacent to the x-ray room;
- (o) The anticipated x-ray workload expressed in number of patients and exposures per week including:
 - (i) Technique factors used, or milliamperere-seconds or milliamperere-minutes per week; and
 - (ii) Estimates of the percentage of the workload expected to occur for a particular beam direction.

(5) For new and modified installations only, the following are minimum design requirements for medical x-ray machine operator booths. These requirements do not apply to dental, podiatry, and veterinary installations. See subsections (6) and (7) of this section for dental panoramic and cephalometric requirements.

(a) The operator shall be allotted 0.7 sq. meters (7.5 sq. ft.) or more of unobstructed floor space in the x-ray booths.

(i) The 0.7 sq. meters (7.5 sq. ft.) of minimum space specified under subsection (5)(a) of this section shall be a geometric configuration where no dimension is less than 61.0 centimeters (2.0 ft.).

(ii) The allotted space shall exclude an encumbrance by the console, such as an overhang, cables, or other similar encroachment.

(iii) An extension of a straight line drawn between any point on the edge of the booth shielding and the nearest vertical edge of a vertical cassette holder, corner of the examination table, or any part of the tube housing assembly shall not impinge on the unobstructed space.

(iv) The booth walls shall be 2.1 meters (7.0 ft.) or more and shall be permanently fixed to the floor or other structure as may be necessary.

(v) When a door or moveable panel is used as the integral part of the booth structure, it must have a permissive device which will prevent an exposure when the door or panel is not closed.

(b) Switch placement. The operator's switch for the radiographic machine shall be fixed within the booth. The switch shall:

(i) Be at least 102 centimeters (forty inches) inside the protected area; and

(ii) Allow the operator to use the available viewing windows.

(c) Viewing system requirements.

(i) Each booth shall have at least one viewing device which shall:

(A) Be placed so the operator can view the patient during exposure; and

(B) Be placed so the operator can have full view of the entries into the room.

(ii) When the viewing system is a window, the following requirements also apply:

(A) The window shall have a visible area of 930 square centimeters (1.0 square foot) or more; and

(B) The glass shall have the same lead equivalence or more as that required in the booth's wall where the glass is mounted.

(iii) When the viewing system is by mirrors, the mirrors shall be located to accomplish the general requirements under subdivision (i) of this subsection.

(iv) When the viewing system is by electronic means (for example, TV):

(A) The camera shall be located to accomplish the general requirements under subdivision (i) of this subsection; and

(B) There shall be an alternate viewing system as a backup for electronic failure.

(d) New or modified facilities shall maintain a copy of the floor plan and shielding calculations required under subsection (1) of this section.

(6) Dimensions of primary beam shielding shall exceed the largest possible beam size by 30.5 centimeters (one foot) or more in every direction. Cephalometric primary beam shielding shall be deemed adequate if, for a maximum workload of twenty films a week, two-pound lead is installed (for occupied areas).

(7) A viewing device shall be present in dental panoramic and cephalometric x-ray installations, so the requirements of subsection (5)(c) of this section are met.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-032, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-032, filed 9/16/83; Order 1084, § 402-28-032, filed 1/14/76. Formerly WAC 402-28-030 (part).]

WAC 246-225-040 General requirements for diagnostic x-ray systems. In addition to other requirements of this chapter, diagnostic x-ray systems shall meet the following requirements:

(1) *Warning label.* The control panel containing the main power switch shall bear the warning statement, legible and accessible to view: "WARNING: This x-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed."

(2) *Battery charge indicator.* On battery-powered generators, visual means shall be provided on the control panel to indicate the battery is in a state of charge adequate for proper operation.

(3) *Leakage radiation from the diagnostic source assembly.* The leakage radiation from the diagnostic source assembly, measured at a distance of 1 meter in any direction from the source, shall not exceed 2.58×10^{-5} coulombs per kilogram (100 milliroentgens) in one hour when the x-ray tube is operated at its leakage technique factors. Compliance shall be

determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

(4) *Radiation from components other than the diagnostic source assembly.* The radiation emitted by a component other than the diagnostic source assembly shall not exceed 5.16×10^{-7} coulombs per kilogram (2 milliroentgens) in one hour at 5 centimeters from an accessible surface of the component when it is operated in an assembled x-ray system under conditions for which it was designed. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

(5) *Beam quality.*

(a) The half-value layer (HVL) of the useful beam for a given x-ray tube potential shall not be less than the values shown in this section, Table I. If it is necessary to determine such half-value layer at an x-ray tube potential which is not listed in Table I, linear interpolation or extrapolation shall be made.

WAC 246-225-040 TABLE 1

Design operating range (kilovolts peak)	Measured potential (kilovolts peak)	Half-value layer (millimeters of aluminum equivalent)	Half-value layer (millimeter of aluminum equivalent for dental units)
Below 51—	30	0.3	N/A
	40	0.4	N/A
	50	0.5	1.5
51 to 70—	51	1.2	1.5
	60	1.3	1.5
	70	1.5	1.5
Above 70—	71	2.1	2.1
	80	2.3	2.3
	90	2.5	2.5
	100	2.7	2.7
	110	3.0	3.0
	120	3.2	3.2
	130	3.5	3.5
	140	3.8	3.8
150	4.1	4.1	

(b) For capacitor energy storage equipment, compliance shall be determined with the system fully charged and a setting of at least 10 mAs for each exposure.

(c) The required minimal half-value layer shall include the filtration contributed by materials permanently in position between the focal spot of the tube and the patient. (For example, a table top when the tube is mounted "under the table" and inherent filtration of the tube)

(d) Filtration control. For x-ray systems with variable kVp and variable filtration for the useful beam, a device shall link the kVp selector with the filters and shall prevent an exposure unless the minimum amount of filtration required by subdivision (a) of this subsection is in the useful beam for the selected kVp.

(6) *Multiple tubes.* Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes selected shall be clearly indicated prior to initiation of the exposure. Such indication shall be both on the x-ray control panel and near or on the selected tube housing assembly.

(7) *Mechanical support of tube head.* The tube housing assembly supports shall be adjusted such that the tube hous-

ing assembly remains stable during an exposure unless the tube housing movement during exposure is a designed function of the x-ray system.

(8) *Technique indicators.*

(a) The technique factors used during an exposure shall be indicated before the exposure begins, except when automatic exposure controls are used, in which case the technique factors set prior to the exposure shall be indicated.

(b) On equipment having fixed technique factors, the requirement, under subdivision (a) of this subsection may be met by permanent markings. Indication of technique factors shall be visible from the operator's position except in the case of spot films made by the fluoroscopist.

(9) Certified units. All diagnostic x-ray systems certified to comply with 21 CFR 1020 shall meet the requirements of that certification.

(10) Linearity. The difference between the ratio of exposure to mAs at one mA or mAs setting and the ratio at another mA or mAs setting shall not exceed 0.10 times the sum of the ratios. This is written as:

$$X_1 - X_2 \leq 0.10 (X_1 + X_2)$$

Where X_1 and X_2 are the ratios (mR/mAs) for each mA or mAs station.

The test shall be performed at any selections of mA or mAs without regard to focal spot size, provided neither focal spot size is less than 0.45 millimeter.

(11) kVp accuracy. The difference between the indicated and actual kVp of an x-ray machine shall not be greater than ten percent of the indicated kVp, or, alternatively, if available, the accuracy specifications of the control panel manufacturer must be met.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-040, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-035, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-035, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-035, filed 12/8/80; Order 1084, § 402-28-035, filed 1/14/76. Formerly WAC 402-28-030 (part).]

WAC 246-225-050 Fluoroscopic x-ray systems. Fluoroscopic x-ray systems shall meet the following requirements:

(1) Limitation of useful beam.

(a) The fluoroscopic tube shall not produce x-rays unless the primary barrier is in position to intercept the entire useful beam at all times.

(b) The entire cross section of the useful beam shall be intercepted by the primary protective barrier of the fluoroscopic image assembly at any source-to-image-distance (SID).

(c) Nonimage-intensified fluoroscopic equipment shall not be used.

(d) For fluoroscopic equipment without a spot film device, neither the length nor the width of the fluoroscopic x-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than three percent of the SID. The sum of the excess length and the

excess width shall be no greater than four percent of the SID. Measurements shall be made at the minimum SID available but at no less than 20 centimeters (8 inches) table top to image receptor distance.

(e) For uncertified fluoroscopic equipment with a spot film device, the fluoroscopic x-ray beam with the shutters wide open (during either fluoroscopy itself or spot films) shall be no larger than the dimensions of the largest spot film size for which the device is designed. Measurements shall be made at the minimum SID available, but at no less than 20 centimeters (8 inches) table top to the film plane distance.

(f) For certified (21 CFR 1020) fluoroscopic equipment with a spot film device, neither the length nor the width of the fluoroscopic x-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than three percent of the SID. The sum of the excess length and width shall be no greater than four percent of the SID. Measurements shall be made at the minimum SID available, but at no less than 20 centimeters (8 inches) table top to film plane distance.

(g) Fluoroscopic equipment beam limitation:

(i) Means shall be provided to reduce the beam size at the plane of the image receptor to 125 square centimeters or less; and

(ii) The minimum field size at the greatest SID shall be equal to or less than 5 centimeters by 5 centimeters.

(2) *Activation of the fluoroscopic tube.* X-ray production in the fluoroscopic mode shall be controlled by a deadman switch.

(3) *Entrance exposure rate allowable limits.*

(a) For equipment with or without automatic brightness control, the exposure rate measured at the point where the center of the useful beam enters the patient shall not exceed 2.58×10^{-3} coulombs per kilogram per minute (ten roentgens per minute), except during film recording of fluoroscopic images or when an optional high level control (HLC) is activated.

(b) For equipment provided with HLC, the equipment shall not be operable at a combination of tube potential and current which will result in an exposure rate in excess of 1.29×10^{-3} coulombs per kilogram per minute (5 roentgens per minute) at the point where the center of the useful beam enters the patient, unless the HLC is activated.

(i) Special means of activation of high level controls, such as additional pressure applied continuously by the operator, shall be required to avoid accidental use.

(ii) A continuous signal audible to the fluoroscopist shall indicate the high level control is employed.

(c) Measuring compliance of entrance exposure rate limits. Compliance with subsection (3) of this section shall be determined as follows:

(i) Movable grids and compression devices shall be removed from the useful beam during the measurement;

(ii) If the source is below the table, exposure rate shall be measured 1 centimeter above the table top or cradle;

(iii) If the source is above the table, the exposure rate shall be measured at 30 centimeters above the table top with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;

(iv) In a C-arm type of fluoroscope, the exposure rate shall be measured 30 centimeters from the input surface of the fluoroscopic imaging assembly, with the source positioned at any available SID, provided the end of the beam-limiting device or spacer is no closer than 30 centimeters from the input surface of fluoroscopic imaging assembly; and

(v) In a lateral-type fluoroscope, the exposure rate shall be measured at a point 15 centimeters from the center line of the x-ray table with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the table top is movable, the table top shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters to the center line of the x-ray table.

(d) Periodic measurement of entrance exposure rate limits.

(i) Periodic measurements of the exposure rate shall be made. An adequate period for such measurements shall be annually or after maintenance of the system affecting the exposure rate.

(ii) Results of exposure rate measurements shall be available where the fluoroscopist has ready access to the measurements while using that fluoroscope. Results of the measurements shall include:

(A) The maximum possible coulombs per kilogram per minute (R/minute), as well as the technique factors associated with it;

(B) The name of the person performing the measurements;

(C) The last date the measurements were performed; and

(D) The type of device used in making the measurements.

(iii) Conditions of measurement:

(A) The kVp shall be adjusted to that which will produce the maximum entrance exposure rate;

(B) The high level control, if present, shall not be activated;

(C) The x-ray systems that incorporate automatic exposure rate control (automatic brightness control) shall have sufficient material, for example, lead or lead equivalence, placed in the useful beam to produce the maximum output of the x-ray system; and

(D) X-ray systems not incorporating automatic exposure rate control shall utilize whatever combination of kVp, mA, and other selectable parameters that will generate the highest exposure rate of the x-ray system. Materials, for example, an attenuation block, may be placed in the useful beam to protect the imaging system, as long as the material does not affect the measurement of the exposure rate.

(4) *Barrier transmitted radiation rate limits.*

(a) The exposure rate due to transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, if provided, shall not exceed 5.16×10^{-7} coulombs per kilogram per hour (2 milliroentgens per hour) for each 2.58×10^{-4} coulombs per kilogram per minute (roentgen per minute) of entrance exposure rate. The barrier transmission measurement shall be made at 10 centimeters from an accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor.

(b) Measuring compliance of barrier transmission.

(i) The exposure rate due to transmission through the primary protective barrier combined with radiation from the image intensifier shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

(ii) If the source is below the table top, the measurement shall be made with the input surface of the fluoroscopic imaging assembly positioned 30 centimeters above the table top.

(iii) If the source is above the table top and the SID is variable, the measurement shall be made with the end of the beam-limiting device or spacer as close to the table top as it can be placed, provided the beam-limiting device or spacer shall not be closer than 30 centimeters.

(iv) Movable grids and compression devices shall be removed from the useful beam during the measurement.

(5) *Indication of potential and current.* During fluoroscopy and cinefluorography, x-ray tube potential and current shall be continuously indicated.

(6) *Source-skin distance (SSD).* The source to skin distance shall not be less than:

(a) 38 centimeters on stationary fluoroscopes;

(b) 30 centimeters on mobile fluoroscopes; and

(c) 20 centimeters for image intensified fluoroscopes used for specific surgical application. The user must provide precautionary measures for the use of the fluoroscope due to its short SSD.

(7) *Fluoroscopic timer.*

(a) Means shall be provided to preset the cumulative on-time of the fluoroscopic tube. The maximum cumulative time of the timing device shall not exceed five minutes without resetting.

(b) A signal audible to the fluoroscopist shall indicate the completion of a preset cumulative on-time. Such signal shall continue to sound while x-rays are produced until the timing device is reset. Alternatively, the timing device may terminate exposures at the end of the preset time.

(c) Total fluoroscopic on-time for each patient shall be recorded, either in patient's chart or in a separate log.

(8) *Control of scattered radiation.*

(a) Fluoroscopic table designs when combined with normal operating procedures shall be such that no unprotected part of staff or ancillary person's body shall be exposed to unattenuated scattered radiation which originates from under the table. The attenuation required shall be not less than 0.25 mm lead equivalent.

(b) Equipment configuration when combined with procedures shall be such that no portion of staff or ancillary person's body, except the extremities, shall be exposed to the unattenuated scattered radiation emanating from above the table top unless:

(i) The radiation has passed through not less than 0.25 mm lead equivalent material, for example, drapes, Bucky-slot cover-sliding or folding panel, or self-supporting curtains, in addition to lead equivalency provided by the protective apron referred to under WAC 246-225-020 (2)(e); and

(ii) Exceptions to subdivision (b) of this subsection may be made in some special procedures where a sterile field will not permit the use of the normal protective barriers. Where

the use of prefitted sterilized covers for the barriers is practical, the department shall not permit such exception.

(9) *Radiation therapy simulation systems.* Radiation therapy simulation systems shall be exempt from the requirements of subsection (3) of this section. In addition, these systems shall be exempt from:

(a) Subsections (1) and (4) of this section provided such systems are designed and used in such a manner that no individual other than the patient is in the x-ray room when the system is producing x-rays; and

(b) Subsection (7) of this section if such systems are provided with a means of indicating the cumulative time that an individual patient has been exposed to x-rays.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-050, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-040, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-040, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-040, filed 12/8/80; Order 1084, § 402-28-040, filed 1/14/76; Order 1, § 402-28-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-060 Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Beam limitation. The useful beam shall be limited to the area of clinical interest and show evidence of collimation. This shall be deemed to have been met if a positive beam limiting device has been properly used or if evidence of collimation is shown on at least three sides or three corners of the film, (for example, projections from the shutters of the collimator, cone cutting at the corners or a border at the film's edge).

(1) *General purpose stationary and mobile x-ray systems.*

(a) There shall be provided a means for stepless adjustment of the size of the x-ray field such that at least two dimensions of the x-ray field are independently variable. The minimum field size at a SID of 100 centimeters shall be equal to or less than ten by ten centimeters.

(b) Adequate means shall be provided for visually defining the perimeter of the x-ray field. The total misalignment of the edges of the visually defined field with the respective edges of the x-ray field along either the length or width of the visually defined field shall not exceed 2 percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the central axis of the x-ray beam.

(2) *In addition to the requirements of WAC 246-225-060(1) above all stationary x-ray systems shall meet the following requirements:*

(a) Means shall be provided to indicate when the axis of the x-ray beam is perpendicular to the plane of the image receptor and to align the center of the x-ray field with respect to the center of the image receptor to within 2 percent (5 percent for equipment manufactured prior to August 1974) of the SID. Dental lateral jaw examinations shall be excluded from this requirement;

(b) The beam-limiting device shall numerically indicate the field size in the plane of the image receptor to which it is adjusted;

(c) Indication of field size dimensions and SID's shall be specified in inches and/or centimeters;

(d) Indication of field size dimensions shall be such that aperture adjustments result in x-ray field dimensions in the plane of the image receptor to within 2 percent of the SID when the beam axis is perpendicular to the plane of the image receptor.

(3) *Radiographic equipment designed for only one image receptor size at a fixed SID shall be provided with means to limit the field at the plane of the image receptor to dimensions no greater than those of the image receptor, and to align the center of the x-ray field with the center of the image receptor to within 2 percent of the SID.*

(4) *Special purpose x-ray systems.*

(a) These systems shall be provided with means to limit the x-ray field in the plane of the image receptor so that such field does not exceed each dimension of the image receptor by more than 2 percent of the SID when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

(b) These systems shall be provided with means to align the center of the x-ray field with the center of the image receptor to within 2 percent (5 percent for equipment manufactured prior to August 1974) of the SID.

(c) The above WAC 246-225-060 (4)(a) and 246-225-060 (4)(b) may be met with a system that meets the requirements for a general purpose x-ray system as specified in WAC 246-225-060(1) or, when alignment means are also provided, may be met with either:

(i) An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed (each such device shall have clear and permanent markings to indicate the image receptor size and SID for which it is designed); or

(ii) A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed. Permanent, clearly legible markings shall indicate the image receptor size and SID for which each aperture is designed and shall indicate which aperture is in position for use.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-060, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-051, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-051, filed 12/8/80; Order 1084, § 402-28-051, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-070 Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Radiation exposure control devices. (1) *Timers.* Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition, it shall be impossible to make an exposure when the timer is set to a zero or off position if either position is provided.

[Title 246 WAC—p. 300]

(2) *X-ray control (exposure switch):*

(a) A control which shall be the equivalent of a dead-man switch, shall be incorporated into each x-ray system such that an exposure can be terminated at any time except for:

(i) Exposure of one-half second or less, or

(ii) During serial radiography when means shall be provided to permit completion of any single exposure of the series in process.

(b) Each x-ray control shall be located in such a way as to meet the following requirements:

(i) Stationary x-ray systems shall be required to have the x-ray exposure switch permanently mounted in a protected area so that the operator has no choice but to remain in that protected area during the entire exposure;

(ii) Mobile and portable x-ray systems shall have:

(A) An exposure cord which can extend for a minimum of 12 feet from the patient; or

(B) A protective barrier of 0.25 millimeter lead equivalent between the patient and the operator.

(c) Each x-ray control shall provide visual evidence to the operator that x-rays are being produced and an audible signal that the exposure has terminated.

(3) *Automatic exposure controls (phototimers).* When an automatic exposure control is provided:

(a) Indication shall be made on the control panel when this mode of operation is selected;

(b) When the x-ray tube potential is equal to or greater than 50 kVp, the minimum exposure time for field emission equipment rated for pulsed operation shall be equal to or less than the interval equivalent to two pulses;

(c) The minimum exposure time for all equipment other than that specified in WAC 246-225-070 (3)(b) shall be equal to or less than 1/60 second or a time interval required to deliver 5 mAs, whichever is greater.

(4) *Timer reproducibility.* With a timer setting of 0.5 seconds or less, the difference between the maximum exposure time (Tmax) and the minimum exposure time (Tmin) shall be less than or equal to 10% of the average exposure time (T), when four timer tests are performed:

$$(T_{\max} - T_{\min}) \leq 0.1T$$

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-070, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-052, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-052, filed 12/8/80; Order 1084, § 402-28-052, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-080 Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Source-to-skin or receptor distance. (1) *Limitation.* All radiographic systems shall be provided with a durable, securely fastened means to limit the source-to-skin distance to not less than 23 centimeters. The requirement can be met when the collimator or cone provides the required limits.

(2) *Source to receptor distance measuring device.* All radiographic systems shall be provided with a device or reference, other than a collimator light localizer, which will

(2003 Ed.)

indicate the selected source to image receptor distance (SID) to within 2 percent of the indicated SID.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-053, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-053, filed 12/8/80; Order 1084, § 402-28-053, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-090 Radiographic systems other than fluoroscopic and dental intraoral—Exposure reproducibility. The exposure produced shall be reproducible to within the following criterion: When all technique factors are held constant, the coefficient of variation shall not exceed 0.05.

(1) For manual exposure control mode, this shall be deemed to have been met if when four exposures at identical technique factors are made, the difference between the maximum exposure value (E_{max}) and the minimum exposure value (E_{min}) shall be less than or equal to 10% of the average exposure (E):

$$(E_{max}) - (E_{min}) \leq 0.10E$$

(2) For phototimed exposure control mode, this shall be deemed to have been met if when four exposures at identical technique factors are made, the difference between the maximum exposure value (E_{max}) and the minimum exposure value (E_{min}) shall be less than or equal to 10% of the average exposure (E):

$$(E_{max}) - (E_{min}) \leq 0.1E$$

The four exposures are to be made under the following conditions in phototimed mode:

- (a) The kV is held constant.
- (b) The mA, if selectable, is held constant.
- (c) The selected density, if selectable, is held constant.
- (d) Selection of phototimer radiation detectors (single or multiple detectors selected), if available, is varied for each of the four exposures.
- (e) The same attenuator is placed in the x-ray field between the selected phototimer radiation detectors (photocells) and the radiation detector used to determine the four exposure values.
- (f) The selected phototimer radiation detectors (photocells) are within the x-ray field during each exposure measurement and are covered completely by the attenuator.

(3) Systems employing deliberately mismatched phototimed cells are permitted, providing written specifications for the mismatch are available for inspection.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-090, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-054, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-054, filed 12/8/80; Order 1084, § 402-28-054, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-100 Radiographic systems—Standby radiation from capacitor energy storage equipment. Radiation emitted from the x-ray tube when the exposure switch or timer is not activated shall not exceed a rate of 2 milliroentgens per hour at 5 centimeters from any accessible sur-

(2003 Ed.)

face of the diagnostic source assembly, with the beam-limiting device fully open.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-055, filed 12/8/80; Order 1084, § 402-28-055, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-110 Intraoral dental radiographic systems. In addition to the provisions of WAC 246-225-020, 246-225-030, and 246-225-040 the requirements of this section apply to x-ray equipment and associated facilities used for dental radiography. Criteria for extraoral dental radiographic systems are covered in WAC 246-225-060, 246-225-070, and 246-225-080.

(1) *Source-to-skin distance (SSD).* X-ray systems designed for use with an intraoral image receptor shall be provided with means to limit source-to-skin distance to not less than:

- (a) 18 centimeters if operable above 50 kilovolts peak, or
- (b) 10 centimeters if operable only at 50 kilovolts peak.
- (2) *Field limitation.*

(a) Radiographic systems designed for use with an intraoral image receptor shall be provided with means to limit the x-ray beam such that:

(i) If the minimum source-to-skin distance (SSD) is 18 centimeters or more, the x-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 7 centimeters; and

(ii) If the minimum SSD is less than 18 centimeters, the x-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 6 centimeters.

(b) An open ended position indicating device shall be used. The shielding shall be equivalent to that required for the diagnostic source assembly (WAC 246-225-040(3)).

(3) *Timers.* Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition,

(a) Termination of exposure shall cause automatic resetting of the timer to its initial setting or to zero.

(b) It shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

(4) *X-ray control exposure switch:*

(a) A control, which shall be the equivalent of a dead-man switch, shall be incorporated into each x-ray system.

(b) Each x-ray control shall be located in such a way as to meet the following criterion:

(i) For stationary x-ray systems it shall be required that the control switch be permanently mounted in a protected area (e.g., corridor outside the room) so that the operator has no choice but to remain in that protected area during the entire exposure.

(ii) Permanently mounted in a protected area shall be interpreted as meaning that the exposure switch is fixed in position no less than 36 inches from access to the direct scatter radiation field.

(c) The x-ray control shall provide a visual or audible indication of x-ray production or termination at the operator's protected position.

(5) *Exposure reproducibility.* The co-efficient of variation shall not exceed 0.05 when all technique factors are held constant. This requirement shall be deemed to have been met if, when four exposures are made at identical technique factors, the difference between the maximum exposure (E_{max}) and the minimum exposure (E_{min}) shall be less than or equal to 10% of the average exposure (E):

$$(E_{max} - E_{min}) < 0.1E$$

(6) No diagnostic dental x-ray machine with a fixed, nominal kVp of less than 50 shall be permitted.

(7) *Operating controls.*

(a) Patient and film holding devices shall be used when the techniques permit.

(b) Neither the tube housing nor the position indicating device shall be hand held during an exposure. The tube housing shall remain stable during exposure.

(c) The x-ray system shall be arranged and operated in such a manner that the useful beam at the patient's skin does not exceed the dimensions specified in WAC 246-225-110 (2)(a).

(d) Dental fluoroscopy without image intensification shall be prohibited.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-110, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-080, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-080, filed 12/8/80; Order 1084, § 402-28-080, filed 1/14/76; Order 1, § 402-28-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-120 Therapeutic x-ray installations less than 1 MeV. (1) Equipment requirements.

(a) *Leakage radiation.* When the tube is operated at its leakage technique factors, the leakage radiation shall not exceed the value specified at the distance specified for the classification of that x-ray system:

(i) Contact therapy systems. Leakage radiation shall not exceed 100 milliroentgens per hour at five centimeters from the surface of the tube housing assembly;

(ii) Zero to one hundred fifty kVp systems. Systems shall have a leakage radiation which does not exceed one roentgen in one hour at one meter from the source;

(iii) One hundred fifty-one to nine hundred ninety-nine kVp systems. The leakage radiation shall not exceed one roentgen in one hour at one meter from the source except systems that operate in excess of 500 kVp may have a leakage radiation at one meter from the source equivalent to the exposure within one hour of the useful beam at one meter from the source multiplied by a factor of 0.001.

(b) *Permanent beam limiting devices.* Permanent fixed diaphragms or cones used for limiting the useful beam shall provide the same or higher degree of protection as that required by the tube housing assembly.

(c) *Removable and adjustable beam limiting devices.*

(i) Removable beam limiting devices shall, for the portion of the useful beam to be blocked by these devices, transmit not more than one percent of the original x-ray beam at the maximum kilovoltage and maximum treatment filter;

(ii) Adjustable beam limiting devices installed after the effective date of this section shall meet the requirements of (c)(i) of this subsection;

(iii) Adjustable beam limiting devices installed before the effective date of this section shall, for the portion of the x-ray beam to be blocked by these devices, transmit not more than five percent of the original x-ray beam at the maximum kilovoltage and maximum treatment filter.

(d) *Filter and wedge systems.* Filter systems shall meet the following requirements:

(i) Filters cannot be accidentally displaced from the useful beam at any possible tube orientation;

(ii) Each filter is marked as to its material of construction and its thickness or wedge angle for wedge filters;

(iii) It shall be possible for the operator to determine the presence or absence of each filter in the useful beam when the operator is at the control panel, either by display at the control panel or by direct observation; and

(iv) The filter insertion slot opening shall be covered with an attenuator equivalent to four-pound lead under operating conditions.

(e) *Tube immobilization.* The tube housing assembly shall be capable of being immobilized during stationary treatments.

(f) *Focal spot marking.* The tube housing assembly shall be so marked that it is possible to determine the location of the focal spot to within five millimeters, and such marking shall be readily accessible for use during calibration procedures.

(g) *Timer.*

(i) A timer shall be provided which has a display at the treatment control panel. The timer shall be graduated in minutes and fractions of minutes. The timer shall have a preset time selector and a means of determining elapsed time;

(ii) The timer shall be a cumulative timer which activates with radiation and retains its reading after irradiation is interrupted or terminated;

(iii) The timer shall terminate irradiation when a preselected time has elapsed;

(iv) The timer shall permit accurate presetting and determination of exposure times as short as 1 second;

(v) The timer shall terminate irradiation when set to zero;

(vi) The timer shall not activate until the shutter is opened, when patient irradiation is controlled by a shutter mechanism.

(h) *Control panel functions.* The control panel, in addition to the displays required in other provisions of this chapter, shall have:

(i) An indication of whether x-rays are being produced;

(ii) Means for indicating kV and x-ray tube current;

(iii) The means for terminating an exposure at any time;

(iv) A locking device which will prevent unauthorized use of the x-ray system; and

(v) For x-ray equipment manufactured after the effective date of this section, a positive display of specific filter(s) in the beam.

(i) *Source-to-patient distance.* There shall be means of determining the source-to-patient distance to within five millimeters.

(j) *Shutters.* Unless it is possible to bring the x-ray output to the prescribed exposure parameters within five seconds, the entire useful beam shall be automatically attenuated by a shutter having a lead equivalency not less than that of the tube housing assembly. In addition:

(i) After the unit is at operating parameters, the shutter shall be controlled electrically by the operator from the control panel;

(ii) An indication of shutter position shall appear at the control panel.

(k) *Low filtration x-ray tubes.* Each x-ray system equipped with a beryllium or other low-filtration window shall be clearly labeled as such upon the tube housing assembly and at the control panel;

(l) *Alignment.* When the therapy x-ray system is equipped with a light field indicating the x-ray field, the misalignment of one field edge to the other shall not exceed one percent of any source-to-treatment distance.

(2) *Facility design requirements for systems capable of operating above 50 kVp.*

In addition to shielding adequate to meet requirements of chapters 246-235 and 246-221 WAC and the shielding plan review provisions of WAC 246-225-030, the treatment room shall meet the following design requirements:

(a) *Warning lights.* Treatment rooms to which access is possible through more than one entrance shall be provided with warning lights, in a readily observable position near the outside of all access doors, which will indicate when the useful beam is "on." Or, as an alternative, entrances other than the main one shall be equipped with interior locks, activated for the period of exposure, and the main entrance shall be under control of the operator.

(b) *Voice communication.* Provision shall be made for two-way aural communication between the patient and the operator at the control panel; however, where excessive noise levels make aural communication impractical, other methods of communication shall be used.

(c) *Viewing systems.* Windows, mirrors, closed-circuit television, or an equivalent system shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator can observe the patient from the control panel. When the primary viewing system is by electronic means (e.g., television), an alternate viewing system shall be available for use in the event of electronic failure or treatment must be discontinued until repair is made. If treatment is to be discontinued, this policy shall be included in the written safety procedures. A copy of the safety procedures shall be provided to the operator.

(d) *Additional requirements.* Treatment rooms which contain an x-ray system capable of operating above 150 kVp shall meet the following additional requirements:

(i) All necessary shielding, except for any beam interceptor, shall be provided by fixed barriers;

(ii) The control panel shall be outside the treatment room;

(iii) All doors of the treatment room shall be electronically connected to the control panel such that x-ray production cannot occur unless all doors are closed;

(iv) When the doors referred to in (d)(iii) of this subsection are opened while the x-ray tube is activated:

(A) X-ray production shall terminate within one second; or

(B) The radiation at a distance of one meter from the source shall be reduced to less than 100 milliroentgens per hour within one second.

(v) After the radiation output of the x-ray tube has been affected by the opening of any door referred to in (d)(iii) of this subsection, it shall be possible to restore the x-ray system to full operation only upon:

(A) Closing the door; and subsequently

(B) Reinitiating the exposure at the control panel.

(e) *Calibrations.*

(i) The calibration of an x-ray system shall be performed at intervals not to exceed one year and after any change or replacement of components which could cause a change in the radiation output.

(ii) The calibration of the radiation output of the x-ray system shall be performed by a qualified expert who is physically present at the facility during such calibration.

(iii) Calibration of the radiation output of an x-ray system shall be performed with a calibrated instrument. The calibration of such instrument shall be traceable to a national standard. The instrument shall have been calibrated within the preceding two years.

(iv) The calibrations made pursuant to (e)(i) of this subsection shall be such that the dose at a reference point in soft tissue can be calculated to within \pm five percent.

(v) The calibration of the x-ray system shall include, but not be limited to, the following determinations:

(A) The exposure rates for each combination of field size, technique factors, filter, and treatment distance used;

(B) The degree of alignment between the radiation field and the field indicated by the localizing device if such device is present; and

(C) An evaluation of the uniformity of the radiation field symmetry for the field sizes used and any dependence upon tube housing assembly orientation.

(vi) Records of calibration performed pursuant to (e) of this subsection shall be maintained by the registrant for two years after completion of the calibration.

(vii) A copy of the most recent x-ray system calibration shall be available for use by the operator at the control panel.

(f) *Operating procedures.*

(i) When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices shall be used;

(ii) The tube housing assembly shall not be held by an individual during exposures;

(iii) No individual other than the patient shall be in the treatment room unless such individual is protected by a barrier sufficient to meet the requirements of chapter 246-221 WAC. No individual other than the patient shall be in the treatment room during exposures when the kVp exceeds 150;

(iv) The x-ray system shall not be used in the administration of radiation therapy unless the requirements of (e) of this subsection have been met.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-225-120, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-225-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-

031 (Order 2450), § 402-28-091, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-091, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-091, filed 12/8/80.]

WAC 246-225-130 X-ray and electron therapy systems with energies of one MeV and above. Chapter 246-229 WAC except WAC 246-229-100 (3) and (4) shall apply to medical facilities using therapy systems with energies 1 MeV and above.

(1) *Definitions.* In addition to the definitions provided in WAC 246-225-010, the following definitions shall be applicable to this section.

(a) "Applicator" means a structure which indicates the extent of the treatment field at a given distance from the nominal source and which may or may not incorporate an additional beam-limiting device.

(b) "Beam scattering foil" means a device which scatters and flattens a beam of electrons.

(c) "Central axis of the beam" means a line passing through the origin of the source and the center of the plane figure formed by the edge of the secondary collimating jaws when in a symmetric mode.

(d) "Dose monitoring system" means a system of devices for the detection and display of quantities of radiation.

(e) "Dose monitor unit" means a unit from which the absorbed dose can be calculated.

(f) "Existing equipment" means therapy systems subject to this section which were manufactured on or before the effective date of these regulations.

(g) "Field flattening device" means an absorber used to homogenize the dose rate over the area of a useful beam of x-rays.

(h) "Field size" means the dimensions of an area in a plane perpendicular to the specified direction of the beam of incident radiation at a maximum dose depth. Determine dimensions by fifty percent decrement lines.

(i) "Gantry" means that part of the system supporting and allowing possible movements of the radiation head.

(j) "Interruption of irradiation" means the stopping of irradiation with the possibility of continuing irradiation without resetting of the operating conditions at the control panel.

(k) "Isocenter" means a fixed point in space located at the intersection of the rotation axes of the principal movements of the therapy system.

(l) "Moving beam therapy" means radiation therapy with relative displacement of the useful beam and the patient during irradiation.

(m) "New equipment" means systems subject to this section which were manufactured after effective date of these regulations.

(n) "Nominal source" means a point from which radiation originates.

(o) "Normal treatment distance" means the distance between the virtual source and a reference point on the central axis of the beam. The reference is located at a position on the central axis at a specified distance from the nominal source.

(p) "Patient" means an individual subjected to examination and treatment.

(q) "Phantom" means a volume of material behaving in a manner similar to tissue with respect to the attenuation and scattering of radiation.

(r) "Primary dose monitoring system" means a system which will monitor the quantity of radiation produced during irradiation and which will terminate irradiation when a preselected number of dose monitor units have been acquired.

(s) "Radiation treatment prescription" means the absorbed dose which is intended to be delivered to the treatment volume.

(t) "Radiation head" means the structure from which the useful beam emerges.

(u) "Redundant dose monitoring combination" means a combination of two dose monitoring systems in which both systems are arranged to terminate irradiation in accordance with a preselected number of dose monitor units.

(v) "Secondary dose monitoring system" means a system which will terminate irradiation in the event of failure of the primary system.

(w) "Shadow tray" means a device attached to the radiation head to support auxiliary beam limiting material.

(x) "Stationary beam therapy" means radiation therapy without relative displacement of the useful beam and the patient during irradiation.

(y) "Target" means that part of a radiation source which intercepts a beam of accelerated particles with subsequent emission of other radiation.

(z) "Termination of irradiation" means the stopping of irradiation in a fashion which will not permit continuance of irradiation without the resetting of operating conditions at the control panel.

(aa) "Treatment field" means the cross-sectional area of the patient's tissue which is to be irradiated.

(bb) "Treatment volume" means that portion of the patient's body which is to be irradiated.

(2) *Requirements for equipment.*

(a) *Leakage radiation to the patient area.*

(i) New equipment shall meet the following requirements:

(A) For all operating conditions, the dose equivalent in rem due to leakage radiation, including x-ray and electrons, but excluding neutrons, at any point in a circular plane of two meters radius centered on and perpendicular to the central axis of the beam at the normal treatment distance and outside the maximum useful beam, shall not exceed 0.1 percent of the maximum dose equivalent in rem of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the plane surface. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified; and

(B) For each system the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in (a)(i)(A) of this subsection for specified operating conditions. Records for leakage radiation shall be maintained at the installation for inspection by the department.

(ii) Existing equipment (that installed prior to the effective date of the regulations) shall meet the following requirements:

(A) The leakage radiation, excluding neutrons, at any point in the area specified by (a)(i)(A) of this subsection, where such area intercepts the central axis of the beam one meter from the nominal source, shall not exceed 0.1 percent of the maximum dose equivalent in rems of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the surface of the reference circular plane. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

(B) For each system, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in (a)(ii)(A) of this subsection for specified operating conditions. Records for radiation leakage shall be maintained at the installation for inspection by the department.

(b) *Leakage radiation outside the patient area.*

(i) The dose equivalent in rem due to leakage radiation, except in the area specified in (a) of this subsection, when measured at any point one meter from the path of the charged particle, before the charged particle strikes the target or window, shall not exceed 0.1 percent for x-ray leakage of the maximum dose equivalent in rems of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the circular plane specified in (a) of this subsection.

(ii) The registrant shall determine, or obtain from the manufacturer, the actual leakage radiation existing at the positions specified in (a) of this subsection for specified operating conditions. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

(c) *Beam-limiting devices.* Secondary beam-limiting devices shall be provided and such devices shall transmit no more than two percent of the useful beam for the portion of the useful beam attenuated by the beam-limiting device. The neutron component of the useful beam shall not be included in this requirement.

(d) *Beam-modifying devices.*

(i) When the absorbed dose rate information required by subsection (2)(q) of this section is dependent on operation with a beam-flattening or beam-scattering device in place, the device shall be removable from the machine only by the use of tools.

(ii) In systems using interchangeable beam-flattening devices or beam-scattering foils:

(A) Irradiation shall not be possible until a selection of beam-modifying device is made and verified at the treatment control panel;

(B) An interlock system shall be provided to prevent irradiation when the beam-modifying device selected is not in the correct position; and

(C) A display at the control panel shall indicate what beam-modifying device is selected.

(e) *Wedges.*

(i) Presence of wedges in the beam shall be indicated at the control panel, by direct observation or by electronic means.

(ii) Each wedge removable from the system shall be clearly identified as to that wedge's material of construction, thickness, and wedge angle.

(iii) An interlock shall be provided to prevent irradiation when a wedge selection carried out in the treatment room does not agree with the wedge selection indicated at the control panel.

(f) *Beam quality.* The registrant shall obtain from the therapy x-ray system manufacturer, and have available, the following information:

(i) At various beam energies, the x-ray absorbed dose expressed as a fraction of maximum absorbed dose;

(ii) At various beam energies, the absorbed dose at the surface of the skin as a fraction of the maximum absorbed dose; and

(iii) The maximum percentage absorbed dose due to stray neutrons in the useful beam at specified operating conditions.

(g) *Beam monitors.* Therapy systems shall be provided with radiation detectors in the radiation head.

(i) New equipment shall be provided with two or more radiation detectors. The detectors shall be incorporated into two monitoring systems arranged either as a primary/primary combination or as a primary/secondary combination.

(ii) Existing equipment shall be provided with one or more radiation detectors. The detector shall be incorporated into a primary system.

(iii) The detectors and system where the detector is incorporated shall meet the following requirements:

(A) Each primary system shall have a detector which is a transmission full-beam detector placed on the patient side of beam-modifying devices;

(B) The detectors shall be removable only with tools and shall be interlocked to prevent incorrect positioning;

(C) Each detector shall be capable of independently monitoring and controlling the useful beam;

(D) Each detector shall form part of a dose-monitoring system from whose readings in dose monitor units the absorbed dose, at a reference point in the treatment volume can be calculated;

(E) For new equipment, the design of the dose-monitoring systems of subsection (2)(i) of this section shall assure the malfunctioning of one system shall not affect the correct functioning of the second system. In addition, the failure of an element common to both systems shall terminate irradiation.

(F) Each dose monitoring system shall have a legible display at the treatment control panel. Each display shall:

(I) Maintain a reading until intentionally reset to zero;

(II) Have only one scale and no scale multiplying factors in new equipment; and

(III) Utilize a design so increasing dose is displayed by increasing numbers and shall be designed so, in the event of an overdosage of radiation, the absorbed dose may be accurately determined under normal conditions of use or foreseeable failures.

(G) In the event of power failure, the dose-monitoring information required in subsection (2)(i) of this section displayed at the control panel at the time of failure shall be retrievable in one or more systems.

(h) *Beam symmetry.*

(i) A therapy machine installed after the effective date of these regulations shall have the capability of comparing the dose rates in each of the four quadrants of the central eighty percent of the useful beam.

(ii) Beam symmetry information shall be displayed at the treatment control panel making possible the following differential between quadrants:

- (A) Five percent for straight-through accelerators; and
- (B) Three percent for bending-magnet accelerators.

(iii) Beam asymmetry in excess of a ten percent quadrant differential shall cause treatment to terminate, or shall prevent irradiation.

(i) *Selection and display of dose monitor units.*

(i) Irradiation shall not be possible until a selection of a number of dose monitor units is made at the treatment control panel.

(ii) After useful beam termination, it shall be necessary manually to reset the preselected dose monitor units before treatment is reinitiated.

(iii) The preselected number of dose monitor units shall be displayed at the treatment control panel until reset manually for the next irradiation.

(j) *Termination of irradiation by the dose monitoring system.*

(i) Each of the required monitoring systems shall be capable of independently terminating an irradiation. Provision shall be made to test the correct operation of each system.

(ii) Each primary system shall terminate irradiation when the preselected number of dose monitor units is detected by the system.

(iii) Each secondary system shall terminate irradiation when a maximum of the preselected number of dose monitor units plus forty is detected by the system.

(iv) For new equipment, indicators on the control panel shall show which monitoring system terminated the beam.

(k) *Interruption switches.* It shall be possible to interrupt irradiation and equipment movements at any time from the operator's position at the treatment control panel. Following any interruption, it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change is made of a preselected value during an interruption, the equipment shall go to termination condition.

(l) *Termination switches.* It shall be possible to terminate irradiation and equipment movements, or go from an interruption condition to termination conditions, at any time from the operator's position at the treatment control panel.

(m) *Timer.*

(i) A timer shall be provided which has a display at the treatment control panel. The timer shall be graduated in minutes and decimals of minutes. The timer shall have a preset time selector and an elapsed time indicator.

(ii) The timer shall be a cumulative timer which switches on and off with the radiation and retains its reading after irradiation is interrupted or terminated. It shall be necessary to zero and subsequently reset the elapsed time indicator and the preset time selector after irradiation is terminated before irradiation shall again be possible.

(iii) The timer shall terminate irradiation when a preselected time has elapsed if the dose monitoring systems fail to terminate irradiation.

(n) *Selection of radiation type.* Equipment capable of both x-ray therapy and electron therapy shall meet the following requirements:

(i) Irradiation shall not be possible until a selection of radiation type is made at the treatment control panel;

(ii) An interlock system shall be provided to insure that the equipment can emit only the selected radiation type;

(iii) An interlock system shall be provided to prevent irradiation if selected operations carried out in the treatment room do not agree with the selected operations carried out in the treatment control panel;

(iv) With the exception of a specified number of dose monitor units for the purpose of portal film exposures, an interlock system shall be provided to prevent irradiation with x-rays when electron applicators are in place and to prevent irradiation with electrons when accessories for x-ray therapy are in place; and

(v) The radiation type selected shall be displayed at the treatment control panel before and during irradiation.

(o) *Selection of energy.* Equipment capable of generating radiation beams of different energies shall meet the following requirements:

(i) Irradiation shall not be possible until a selection of energy is made at the treatment control panel;

(ii) An interlock system shall be provided to insure the equipment can emit only the energy of selected radiation;

(iii) An interlock system shall be provided to prevent irradiation if selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel; and

(iv) The energy selected shall be displayed at the treatment control panel before and during irradiation.

(p) *Selection of stationary beam therapy or moving beam therapy.* Equipment capable of both stationary beam therapy and moving beam therapy shall meet the following requirements:

(i) Irradiation shall not be possible until a selection of stationary beam therapy or moving beam therapy is made at the treatment control panel;

(ii) An interlock system shall be provided to insure the equipment can operate only in the selected mode;

(iii) An interlock system shall be provided to prevent irradiation when any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel;

(iv) An interlock system shall be provided to terminate irradiation when the movement stops during moving beam therapy;

(v) Moving beam therapy shall be controlled so the required relationship between the number of dose monitor units and movement is obtained; and

(vi) The mode of operation shall be displayed at the treatment control panel.

(q) *Absorbed dose rate.* For new equipment, a system shall be provided from whose readings the absorbed dose rate at a reference point in the treatment volume can be calculated.³ In addition:

(i) The quotient of the number of dose monitor units by time shall be displayed at the treatment control panel; and

(ii) If the equipment can deliver, under any conditions, an absorbed dose rate at the normal treatment distance more than twice the maximum value specified by the manufacturer's anticipated dose rate for any machine parameters utilized, a device shall be provided which terminates irradiation when the absorbed dose rate exceeds a value twice the specified maximum. The value at which the irradiation is terminated shall be in a registrant-maintained record.

(r) *Location of focal spot and beam orientation.* The registrant shall determine, or obtain from the manufacturer, the location with reference to an accessible point on the radiation head of:

(i) The x-ray target or the virtual source of x-rays;

(ii) The electron window or the scattering foil;

(iii) All possible orientations of the useful beam.

(s) *System interlock checks.* Capabilities shall be provided to check radiation safety interlocks. When preselection of operating conditions requires action in the treatment room and at the treatment control panel, selection at one location shall not give a display at the other location until the requisite selected operations in both locations are completed.

(t) *Facility and shielding requirements.* In addition to chapter 246-221 WAC, the following design requirements shall apply:

(i) Except for entrance doors or beam interceptors, required barriers shall be fixed barriers;

(ii) The treatment control panel shall be located outside the treatment room;

(iii) Windows, mirrors, closed-circuit television, or other equivalent viewing systems shall be provided to permit continuous observation of the patient during irradiation and shall be located so the operator may observe the patient from the treatment control panel. When the viewing system is by electronic means, for example, by television, an alternate viewing system shall be provided for use in the event of the primary system failure, or, alternatively, treatments shall be discontinued until the viewing system is again functional;

(iv) Provision shall be made for two-way aural communication between the patient and the operator at the treatment control panel. However, where excessive noise levels make aural communications impractical, other methods of communication shall be used;

(v) Treatment rooms to which access is possible through two entrances or more shall be provided with warning lights and shall indicate when the useful beam is "on" in a readily observable position near the outside of all access doors; and

(vi) Interlocks shall be provided so entrance doors shall be closed before treatment is initiated or continued. When the radiation beam is interrupted by any door opening, it shall be possible to restore the machine to operation only by closing the door and reinitiating exposure by manual action at the control panel.

(u) *Surveys, calibrations, spot checks and operating procedures.*

(i) Survey.

(A) New facilities, and existing facilities not previously surveyed, shall have a survey made by, or under the direction of, a qualified expert. Such surveys shall also be done after a

change in the facility or equipment causing a significant increase in radiation hazard.

(B) The registrant shall obtain a written report of the survey from the qualified expert and the registrant shall transmit a copy of the report to the department.

(C) The report shall indicate instances where the installation, in the opinion of the qualified expert, is in violation of applicable regulations and shall cite the section violated.

(ii) Calibrations.

(A) The calibration of systems subject to this section shall be performed before the system is first used for irradiation of patient and thereafter at time intervals which do not exceed twelve months and after any change which significantly alters the calibration, spatial distribution, or other characteristics of the therapy beam.

(B) The calibration shall be performed by a qualified expert.

(C) Calibration of the dose equivalent of the therapy beam shall be performed with a measurement instrument of which the calibration is traceable to national standards of exposure or absorbed dose and which shall have been calibrated within the preceding two years.

(D) Calibrations made under subsection (2)(u)(ii) of this section shall require the dose at a reference point in soft tissue be calculated within ± 5 percent.

(E) The calibration of the therapy beam shall include, but not be limited to, the following determinations:

(I) Verification that the equipment is operating in compliance with the design specifications concerning the light localizer, the side light and back-pointer alignment with the isocenter, when applicable, variation in the axis of rotation for the table, gantry and jaw system, and beam flatness and symmetry at specified depths;

(II) The output factors in terms of dose per monitor unit or dose per minute at a specific depth in a phantom for the range of field sizes used, for each effective energy, and for each treatment distance used for radiation therapy;

(III) The congruence between the radiation field and the field indicated by the localizing device; and

(IV) The uniformity of the radiation field and its dependency upon the direction of the useful beam.

(F) Records of the calibration performed under subsection (2)(u)(ii) of this section shall be maintained by the registrant for two years after completion of the calibration.

(G) A copy of the latest calibration performed under subsection (2)(u)(ii) of this section shall be available for operator use.

(iii) Spot checks. Spot checks shall be performed on the system subject to this section. Such spot checks shall meet the following requirements:

(A) A qualified expert shall develop, in writing, spot check procedures;

(B) The measurements taken during spot checks shall demonstrate the degree of consistency of the operating characteristics affecting the radiation output of the system or the radiation delivered to a patient during a therapy procedure;

(C) The spot check procedures shall specify the frequency of tests or measurements performed;

(D) For systems where beam quality can vary significantly, spot checks shall include quality checks;

(E) Where a system has built-in devices which provide a self-check of any parameter during irradiation, the spot check procedures shall require the parameter be independently verified at specific time intervals;

(F) Erratic spot checks or inconsistent spot checks of calibration data shall be promptly investigated and corrected before the system is used for patient irradiation;

(G) When a spot check indicates a significant change in the operating characteristics of a system, as specified in the qualified expert's spot check procedures, the system shall be recalibrated as required under subsection (2)(u)(ii) of this section;

(H) Records of spot check measurements performed under subsection (2)(u)(iii) of this section shall be maintained by the registrant for a period of one year or for twice as long as the spot check cycle, whichever is greater;

(I) Operating procedures.

(I) No individual other than the patient shall be in the treatment room during treatment of a patient.

(II) If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used.

(III) The system shall not be used in the administration of radiation therapy unless subsection (2)(u)(i), (ii), and (iii) of this section are met.

³ The radiation detectors specified under subsection (2)(g) of this section may form part of this system.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-130, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-101, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-101, filed 12/8/80.]

WAC 246-225-140 Veterinary medicine radiographic installations. (1) Equipment.

(a) The protective tube housing shall be of diagnostic type.

See WAC 246-225-040(4).

(b) Diaphragms, cones, or a stepless adjustable collimator shall be used for collimating the useful beam to the area of clinical interest and shall provide the same degree of protection as is required of the housing. Cones or diaphragms, if used, shall be marked with their field size and the distance at which they are to be used.

(c) The half-value layer (HVL) of the useful beam shall not be less than as shown in the following table:

Measured Potential (kilovolts peak)	Half-value Layer (millimeters of aluminum equivalent)
70 and below	1.5
71	2.1
80	2.3
90	2.5
100	2.7
110	3.0
120	3.2

(d) A device shall be provided to terminate the exposure after a preset time or exposure. It must not be possible for the device to allow an exposure when preset at "zero" or "off."

(e) A dead-man type of exposure switch shall be provided, together with an electrical cord of sufficient length, so that the operator can stand out of the useful beam and at least two meters from the animal during all x-ray exposures.

(f) Reproducibility requirements as described under WAC 246-225-090.

(2) *Structural shielding.* All wall, ceiling, and floor areas shall be equivalent to or provided with applicable protective barriers as required in WAC 246-225-030(1).

(3) *Operating procedures.*

(a) In any application in which the operator is not located behind a protective barrier, clothing consisting of a protective apron having a lead-equivalent of not less than 0.25 millimeters shall be worn by the operator and any other individuals in the room during exposures.

(b) No individual other than the operator shall be in the x-ray room while exposures are being made unless such individual's assistance is required.

(c) When an animal or film must be held in position during radiography, mechanical supporting or restraining devices should be used. If the animal must be held by an individual, that individual shall be protected with appropriate shielding devices, such as protective gloves and apron, and that individual shall be so positioned that no part of that individual's body will be struck by the useful beam. The requirements of WAC 246-221-090, Personnel monitoring, and WAC 246-225-020 (2)(h)(iv) apply to such individuals.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-140, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-110, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-110, filed 12/8/80; Order 1084, § 402-28-110, filed 1/14/76; Order 1, § 402-28-110, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-150 X-ray film developing requirements. Compliance with this section is required of healing arts registrants and is designed to ensure the patient and operator exposure is minimized, and to produce optimum image quality and diagnostic information.

(1) Manual processing of films:

(a) The following relationship between temperature of the developer and development time must be used (standard chemistry only):

THERMOMETER READINGS (DEGREES)	MINIMUM DEVELOPING TIMES (MINUTES)	
	C	F
27-	80	2
	79	2
	78	2 1/2
	77	2 1/2
	76	3
24-	75	3
	74	3 1/2
	73	3 1/2
	72	4
	71	4
22-	70	4 1/2
	69	4 1/2

THERMOMETER READINGS (DEGREES)	MINIMUM DEVELOPING TIMES (MINUTES)
20- 68	5
67	5 1/2
66	5 1/2
65	6
18- 64	6 1/2
63	7
62	8
61	8 1/2
16- 60	9 1/2

(b) *Processing of film.* All films shall be processed to achieve adequate sensitometric performance. This criterion shall be adjudged met if:

- (i) Film manufacturer's published recommendations for time and temperature are followed; or
- (ii) Each film is developed in accordance with the time-temperature chart as required under subdivision (a) of this subsection.

(c) Devices shall be available giving:

- (i) The actual temperature of the developer; and
 - (ii) An audible or visible signal indicating the termination of a preset time (in minutes).
- (d) Chemical-film processing control.
- (i) Chemicals shall be mixed in accordance with the chemical manufacturer's recommendations.

(ii) Developer replenisher shall be periodically added to the developer tank based on the recommendations of the chemical or film manufacturer. Solution may be removed from the tank to permit the addition of an adequate volume of replenisher.

(iii) All processing chemicals shall be completely replaced at least every two months.

(2) Automatic film processors shall be set up and maintained so radiographic density and contrast are optimal. This criterion shall be adjudged met if:

(a) Film manufacturer's published specifications for time and temperature are followed. In the absence of such specifications, the film shall be developed using the following chart:

MINIMAL REQUIRED DEVELOPER TEMPERATURE		PROCESSOR DEVELOPER IMMERSION TIME*
°C	°F	Seconds
35	95	20
34.5	94	21
34	93	22
33.5	92	23
33	91	24
32	90	25
31.5	89	26
31	88	27
30.5	87	28
30	86	29
29.5	85	30

* Immersion time only, no cross-over time included.

The specified developer temperature and immersion time shall be posted in the dark room or on the automatic processor; and

(b) Replenishment of the developer chemistry is optimal:

(i) The processor shall deliver an adequate rate of developer replenishment; and

(ii) For facilities with a low x-ray workload, standby replenishment, flood replenishment, or periodically sending prefixed films through the processor may be necessary.

(c) Sensitometric tests of processor performance demonstrate the processor is achieving radiographic density and contrast equal to other processor models operating at equivalent developer immersion time and developer temperatures and using comparable chemistry.

(3) *Darkrooms.* Darkrooms shall be constructed so film being processed, handled, or stored will be exposed only to light passed through a safelight filter. The filter shall be of the type specified by the film manufacturer. Bulb wattage in the safelight shall be no greater than fifteen watts. The safelight shall be mounted at least 1.2 meters (four feet) above work areas.

(4) The department shall make x-ray film development and darkroom tests as necessary to determine compliance with this section.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-225-150, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-225-150, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-225-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-28-990, filed 9/16/83; Order 1084, Appendix C (codified as WAC 402-28-990), filed 1/14/76.]

WAC 246-225-160 Mammography. (1) The use of a special purpose x-ray machine designed and used solely for mammography is required. Exempted from this requirement shall be x-ray equipment using xerography for evaluation of breast implant integrity.

(2) All mammographic calibration, evaluation, service, and quality control actions shall be documented in writing and maintained at the facility for a three-year period. Records must be easily accessible to operators of these x-ray units.

(3) All tests requiring the use of a breast phantom shall employ a phantom similar to or identical to the one required by the American College of Radiology for its mammography accreditation program.

(4) Machine requirements:

(a) Mammography x-ray machines must be evaluated upon any major component change and on a yearly basis by a qualified medical physicist. Evaluation shall document (but is not limited to) half-value layer (HVL), kVP accuracy, reproducibility, timer accuracy, resolution achieved with film in use at the facility, focal spot size, mA linearity, light versus x-ray field alignment, and patient exposures (glandular tissue dose) following the measurement protocol in NCRP Report No. 85 (using a breast phantom). This requirement shall include initial acceptance testing upon the x-ray system's installation prior to human use.

(b) The half-value layer (HVL) for film/screen mammography shall be between the values of measured kVp/100 and measured kVp/100 + 0.1 millimeters aluminum. The half-value layer for xerography shall be at least 1.2 mm but no greater than 1.6 mm of aluminum as measured at 50 kVP. The HVL shall include the contribution to filtration made by the compression device.

(c) Exposure reproducibility: Manual techniques. See WAC 246-225-090.

(d) Exposure reproducibility: Photo-timed techniques. Mammographic systems in the AEC mode shall be able to maintain constant film density to within an optical density of ± 0.3 of the average optical density over the range of clinically used kVps, using BR-12 or other breast equivalent material phantom thicknesses of 2 centimeters to 6 centimeters. If the facility has established a technique chart that utilizes varying technical factors for different breast thicknesses, those adjustments in technique may be used when complying with this requirement.

(e) Radiographic timers. See WAC 246-225-070.

(f) kVP accuracy: The kVP accuracy published by the x-ray machine manufacturer shall be maintained at the specified level. For determination of actual versus indicated kVP, the manufacturer's recommendations for testing shall be followed.

(g) mA linearity. See WAC 246-225-040(10).

(h) All special purpose x-ray machines designed solely for mammography and installed after January 1, 1992, shall be equipped with a milli-ampere-second (mAs) read-out device, registering after each phototimed exposure. Alternatively, a means of determining mAs after each exposure shall be provided.

(i) Beam limitation:

(i) Mammographic systems shall be provided with means to limit the useful beam such that the x-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor at any designed SID except the edge of the image receptor designed to be adjacent to the chest wall where the x-ray field may not extend beyond such edge by more than two percent of the SID.

(ii) Beam limiting devices consisting of an assortment of fixed, removable cones sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed shall have clear and permanent markings to indicate the image receptor size and SID for which it is designed.

(iii) When the beam limiting device and image receptor support device are designed to be used to immobilize the breast during a mammographic procedure and the SID may vary, the SID indication specified in WAC 246-225-060 (4)(c)(i) and (ii) shall be the maximum SID for which the beam limiting device or aperture is designed.

(iv) In the absence of a visually defined x-ray field each image receptor support shall have clear and permanent markings to indicate the maximum image receptor size for which it is designed.

(j) The combination of source-to-image distance, magnification, and focal spot size shall result in a radiographic resolution of at least 12 line pairs per millimeter. This standard applies to the mammographic, single emulsion film being used at the facility.

(k) The x-ray machine shall be equipped with a means of immobilizing and compressing the breast with a force of at least twenty-five pounds but no greater than forty pounds.

(l) Dedicated mammographic x-ray units are exempted from the requirements of WAC 246-225-030 (5)(b)(i) pro-

vided that appropriate operator shielding is employed (as defined by NCRP Report 49).

(m) *Transmission limit for image receptor supporting devices used for mammography.* For x-ray systems manufactured after September 5, 1978, which are designed only for mammography, the transmission of the primary beam through any image receptor support provided with the system shall be limited such that the exposure 5 centimeters from any accessible surface beyond the plane of the image receptor supporting device does not exceed 25.8 nanocoulombs per kilogram (0.1 milliroentgen) for each activation of the tube. Exposure shall be measured with the system operated at the minimum SID for which it is designed. Compliance shall be determined at the maximum rated peak tube potential for the system and at the maximum rated product of tube current and exposure time (mAs) for that peak tube potential. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

(n) Maximum glandular doses. Glandular tissue dose for a cranio-caudal view of a 4.5 cm compressed breast using dose calculation methods found in NCRP Report # 85 shall not exceed the following:

Screen-film:

No grid =	1.5 milliGray (100 millirads)/projection
Grid =	2.5 milliGray (300 millirads)/projection
Xerox =	4.0 milliGray (400 millirads)/projection

(5) A quality control program shall be written and implemented for all mammographic facilities. This shall include (but shall not be limited to) tests performed, testing frequency, testing protocol, control limits for each test, corrective actions taken, and equipment maintenance/service. Program requirements include:

(a) Daily tests:

Film processor control charts using a sensitometric/densitometric based measurement system shall be required for each day the mammographic machine is in operation. Single emulsion mammographic film shall be used for this evaluation. The sensitometer shall be one with a 21-step optical attenuator.

Parameters in daily film processor tests shall include:

(i) Speed index (mid-density):

Control limits ± 0.15 optical density

(ii) Contrast index (density difference):

Control limits ± 0.15 optical density

(iii) Base + fog:

Maximum density shall not exceed 0.20 optical density.

(iv) Solution temperatures, using a digital thermometer that reads out in tenths of a degree and that is accurate to within $\pm 0.5^\circ\text{F}$.

Control limits $\pm 1.0\text{ F}$

(b) Monthly tests:

(i) Chemical replenishment rates.

(ii) Image quality evaluation. The mammographic system shall be capable of providing an image of a 0.75 mm fiber, 0.32 mm speck group, and a 0.75 mm mass from an

ACR, or equivalent, phantom on the standard mammographic image receptor system in use at the facility. Mammograms shall not be taken on patients if this minimum is not met. Any fibers, speck groups or masses larger than those specified shall also be imaged.

(c) Quarterly tests:

(i) Film/screen contact for all cassettes, using a 40-mesh copper screen.

(ii) Analyses of reject/repeat films.

(iii) Fixer retention in processed film.

(d) Semi-annual tests:

(i) Darkroom fog.

(ii) Compression device force.

(e) Yearly tests: See WAC 246-225-160 (4)(a).

(f) Cassette screens must be cleaned at least weekly.

(g) Records shall be maintained for quality control test equipment which requires calibration, and such calibrations shall be performed in accordance with recommendations of the manufacturer of the test equipment.

(h) Film processing. See WAC 246-225-150. A film processor that cannot be consistently made to operate within the control limits specified in (a) of this subsection shall not be used to process mammographic films.

(6) Operator competency:

(a) A mammographic machine operator shall be licensed, certified, or registered by the department as either:

(i) A health care practitioner, licensed under Title 18 RCW, if performing mammography is within the person's authorized scope of practice; or

(ii) A diagnostic radiologic technologist certified in accordance with chapter 18.84 RCW; or

(iii) An x-ray technician registered in accordance with chapter 18.84 RCW, with two or more years' experience in performing mammography and satisfactory completion of at least sixteen hours of training in mammographic positioning, mammographic quality assurance, and/or other related areas subject to approval by the department.

(b) A mammographic machine operator shall complete the equivalent of at least eight hours of training every twelve months covering such areas as mammographic positioning, mammographic quality assurance and other related areas subject to approval by the department.

(c) A mammographic machine operator shall meet the requirements of WAC 246-225-020 (2)(b) and 246-225-99920.

(7) Masking devices shall be made available to block extraneous light from the viewer's eye when the illuminated surface of the viewbox is larger than the exposed area on the film.

(8) Additional requirement for mobile mammography services:

The daily film processor performance testing required in subsection (5)(a) of this section shall apply to all film processors used by the mobile service. No processor shall be used unless it meets the control limits specified by subsection (5)(a)(i) through (iv) of this section.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-225-160, filed 12/9/93, effective 1/9/94; 92-05-011 (Order 240), § 246-225-160, filed 2/7/92, effective 3/9/92.]

(2003 Ed.)

WAC 246-225-99920 Appendix II—Determination of competency. The following are areas in which the department considers it important that an individual have expertise for the competent operation of x-ray equipment.

(1) *Familiarization with equipment.*

(a) Identification of controls.

(b) Function of each control.

(c) The use of a technique chart.

(2) *Radiation protection.*

(a) Collimation.

(b) Filtration.

(c) Gonad shielding and other patient protection devices.

(d) Restriction of x-ray tube radiation to the image receptor.

(e) Personnel protection.

(f) Grids.

(3) *Film processing.*

(a) Film speed as relates to patient exposure.

(b) Film processing parameters.

(c) Quality assurance and quality control.

(4) *Emergency procedures.*

Termination of exposure in event of automatic timing device failure.

(5) *Proper use of personnel dosimetry, if required.*

(6) *Understanding units of radiation.*

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-225-99920, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-225-99920, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-28-99003, filed 9/16/83; Order 1084, Appendix F (codified as WAC 402-28-99003), filed 1/14/76.]

WAC 246-225-99930 Appendix III—Information to be submitted by persons proposing to conduct healing arts screening using ionizing radiation. Persons requesting that the department approve a healing arts screening program shall submit the following information and evaluation:

(1) Name and address of the applicant and, where applicable, the names and addresses of agents within this state.

(2) Diseases or conditions and frequency for which the x-ray examinations are to be used.

(3) Description in detail of the x-ray examinations proposed in the screening program.

(4) Description of the population to be examined in the screening program, i.e., age, sex, physical condition, and other appropriate information.

(5) An evaluation of any known alternate methods not involving ionizing radiation which could achieve the goals of the screening program and why these methods are not used in preference to the x-ray examinations.

(6) An evaluation by a qualified expert of the x-ray system(s) to be used in the screening program. The evaluation by the qualified expert shall show that such system(s) satisfy all requirements of these regulations. The evaluation shall include a measurement of patient exposures from the x-ray examinations to be performed.

(7) A description of the diagnostic film quality control program.

(8) A copy of the technique chart for the x-ray examination procedures to be used.

[Title 246 WAC—p. 311]

(9) The qualifications of each individual who will be operating the x-ray system(s).

(10) The qualifications of the individual who will be supervising the operators of the x-ray system(s). The extent of supervision and the method of work performance evaluation shall be specified.

(11) The name and address of the individual who will interpret the radiograph(s).

(12) A description of the procedure to be used in advising the individuals screened and their private practitioners of the healing arts of the results of the screening procedure and any further medical needs indicated.

(13) A description of the procedures for the retention or disposition of the radiographs and other records pertaining to the x-ray examinations.

(14) An indication of the frequency of screening and the duration of the entire screening program.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-99930, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-99930, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-99004, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-99004, filed 12/8/80.]

Chapter 246-227 WAC

RADIATION PROTECTION—INDUSTRIAL X-RAY

WAC

246-227-001	Purpose.
246-227-020	Definitions.
246-227-040	Radiation survey instruments.
246-227-050	Utilization and survey records.
246-227-060	Limitations—Personal radiation safety requirements for radiographers and radiographer's assistants.
246-227-070	Operating and emergency procedures.
246-227-080	Personnel monitoring control.
246-227-090	Security—Precautionary procedures in radiographic operations.
246-227-095	Posting.
246-227-120	Other records required.
246-227-130	Special requirements for enclosed radiography.
246-227-150	Special requirements for permanent radiographic installation.
246-227-170	Appendix A—Minimum subjects to be covered in training radiographers.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-227-010	Scope. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-010, filed 12/9/93, effective 1/9/94.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
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WAC 246-227-001 Purpose. The regulations in this chapter establish radiation safety requirements for persons utilizing x-ray machines for industrial radiography. The requirements of this part are in addition to and not in substitution for the other requirements of these regulations.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-001, filed 12/9/93, effective 1/9/94.]

WAC 246-227-020 Definitions. As used in this part:

(1) "Enclosed radiography" means industrial radiography employing radiation machines conducted in an enclosed

cabinet or room and includes cabinet radiography and shielded room radiography.

(a) "Cabinet radiography" means industrial radiography employing radiation machines conducted in an enclosure or cabinet so shielded that every location at the exterior of the enclosure or cabinet meets the condition specified in WAC 246-221-060.

"Cabinet x-ray system" means an x-ray system with the x-ray tube installed in an enclosure (hereinafter termed "cabinet") which, independently of existing architectural structure except the floor on which it may be placed, is intended to contain at least that portion of a material being irradiated, provide radiation attenuation, and exclude personnel from its interior during generation of x-radiation. Included are all x-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad, and bus terminals, and in similar facilities. An x-ray tube used within a shielded part of a building, or x-ray equipment which may temporarily or occasionally incorporate portable shielding is not considered a cabinet x-ray system.

(b) "Shielded-room radiography" means industrial radiography conducted in a room so shielded that every location on the exterior of the room meets the conditions specified in WAC 246-221-060.

(2) "Industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods utilizing x-ray machines. Industrial radiography as used in this chapter does not include well logging operations.

(3) "Permanent radiographic installation" means an installation in which the shielding is an integral part to the building structure, such that the radiographic operations conducted there are not mobile and not temporary.

(4) "Personal supervision" means supervision by a radiographer such that the radiographer is physically present at the radiography site and in such proximity that communication can be maintained and immediate assistance given as required.

(5) "Radiographer" means any individual who performs or who, in attendance at the site where x-ray machines are being used, personally supervises industrial radiographic operations and who is responsible to the registrant for assuring compliance with the requirements of these regulations.

(6) "Radiographer's assistant" means any individual who, under the personal supervision of a radiographer, uses radiation machines, or radiation survey instruments in industrial radiography.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-020, filed 12/9/93, effective 1/9/94.]

WAC 246-227-040 Radiation survey instruments. (1) The registrant shall maintain sufficient calibrated and operable radiation survey instruments to make physical radiation surveys as required by this part and chapter 246-221 WAC. Instrumentation required by this section shall have a range such that two milliroentgens per hour through one roentgen per hour can be measured.

(2) Each radiation survey instrument shall be calibrated:

(a) At energies appropriate for use and at intervals not to exceed three months and after each instrument servicing;

(b) Such that accuracy within \pm twenty percent traceable to a national standard can be demonstrated; and

(c) At two or more widely separated points, other than zero, on each scale.

(3) Records of these calibrations shall be maintained for three years after the most recent calibration date.

(4) The requirements of this section do not apply to registrants using only radiation machines in enclosed radiographic systems.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-040, filed 12/9/93, effective 1/9/94.]

WAC 246-227-050 Utilization and survey records.

(1) Each registrant shall maintain records of the following information for three years after the date of each radiographic operation and shall maintain these records for inspection by the department:

(a) A description (or make and model number) of the radiation machine used along with the techniques utilized for each job;

(b) The identity of the radiographer and radiographer's assistant performing the work;

(c) Locations where used and dates of use;

(d) A physical radiation survey made of the boundary of the restricted area during radiographic operations. The maximum reading at the boundary shall be recorded. The records shall indicate approximate distance from source to boundaries and any occupied areas with exposure levels greater than 2 mR in any hour during radiographic operations; and

(e) The model and serial number of the survey meter used in (d) of this subsection.

(2) The requirements of subsection (1) of this section shall not apply in industrial radiography utilizing radiation machines in enclosed interlocked cabinets or rooms which are not occupied during radiographic operations, which are equipped with interlocks such that the radiation machine will not operate unless all openings are securely closed and which is so shielded that every location on the exterior meets conditions for an unrestricted area, as specified in WAC 246-221-060.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-050, filed 12/9/93, effective 1/9/94.]

WAC 246-227-060 Limitations—Personal radiation safety requirements for radiographers and radiographer's assistants. (1) No registrant shall permit any individual to act as a radiographer as defined in this chapter until such individual:

(a) Has been instructed in the subjects outlined in WAC 246-227-170;

(b) Has received copies of and instruction in the regulations contained in chapters 246-220, 246-222, 246-221 and 246-227 WAC, and the registrant's operating and emergency procedures, and shall have demonstrated understanding thereof;

(c) Has demonstrated competence to use the radiation machine and the radiation survey instruments which will be employed in the individual's assignment; and

(2003 Ed.)

(d) Has demonstrated understanding of the instructions in this paragraph by successful completion of written test or oral test on the subjects covered.

(2) No registrant shall permit any individual to act as a radiographer's assistant as defined in this part until such individual:

(a) Has received copies of an instruction in the registrant's operating and emergency procedures;

(b) Has demonstrated competence to use, under the personal supervision of the radiographer, the radiation survey instruments which will be employed in the individual's assignment;

(c) Has demonstrated understanding of the instructions in this paragraph by successfully completing a written or oral test.

(3) Each registrant shall maintain records of training and testing which demonstrate that the requirements of subsections (1) and (2) of this section are met. These records shall be retained for at least one year following termination of employment.

(4) When a radiographer's assistant is using an x-ray machine, the radiographer shall maintain direct surveillance.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-060, filed 12/9/93, effective 1/9/94.]

WAC 246-227-070 Operating and emergency procedures. The registrant's operating and emergency procedures shall include instructions in at least the following:

(1) The handling and use of radiation machines to be employed such that no individual is likely to be exposed to radiation doses in excess of the limits established in chapter 246-221 WAC;

(2) Methods and occasions for conducting radiation surveys;

(3) Methods for controlling access to radiographic areas;

(4) Methods and occasions for locking or securing radiation machines;

(5) Personnel monitoring and the use of personnel monitoring equipment including steps that must be taken immediately by radiography personnel in the event a pocket dosimeter is found to be off-scale;

(6) The procedure for notifying proper personnel in the event of a theft, loss, overexposure or accident involving a radiation machine; and

(7) Maintenance of records.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-070, filed 12/9/93, effective 1/9/94.]

WAC 246-227-080 Personnel monitoring control. (1) No registrant shall permit any individual to act as a radiographer or as a radiographer's assistant unless, at all times during radiographic operations, each such individual shall wear a film or TLD badge and a direct reading pocket dosimeter. Pocket dosimeters shall be capable of measuring exposures from zero to at least two hundred milliroentgens. A film or TLD badge shall be assigned to and worn by only one individual.

(2) Pocket dosimeters shall be read and doses recorded daily. Pocket dosimeters shall be charged at the beginning of each working day. Pocket dosimeters shall be checked at

least annually for correct response to radiation. Acceptable dosimeters shall read within \pm thirty percent of the true radiation exposure. A film or TLD badge shall be immediately processed if a pocket dosimeter is discharged beyond its range during normal use. The film or TLD badge reports received from the film or TLD badge processor and records of pocket dosimeter readings shall be maintained until the department authorizes their disposal.

(3) The requirements for use of pocket dosimeter or pocket chamber shall not apply in industrial radiography utilizing radiation machines in enclosed interlocked cabinets or rooms which are not occupied during radiographic operations, which are equipped with interlocks such that the radiation machine will not operate unless all openings are securely closed and which are so shielded that every location on the exterior meets conditions for an unrestricted area, as specified in WAC 246-221-060.

(4) The requirement for film badges or TLDs do not apply to those users of cabinet x-ray systems which do not allow human access and which meet the requirements of WAC 246-227-130.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-080, filed 12/9/93, effective 1/9/94.]

WAC 246-227-090 Security—Precautionary procedures in radiographic operations. (1) During each radiographic operation, the radiographer or radiographer's assistant shall maintain a direct surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in chapter 246-220 WAC except:

(a) Where the high radiation area is equipped with a control device or alarm system as described in WAC 246-221-120 (1)(e)(ii); or

(b) Where the high radiation area is locked to protect against unauthorized or accidental entry.

(2) When not in operation or when not under direct surveillance, radiation machines shall be secured to prevent use by unauthorized personnel.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-090, filed 12/9/93, effective 1/9/94.]

WAC 246-227-095 Posting. Notwithstanding any provisions in WAC 246-221-130, areas in which radiography is being performed shall be conspicuously posted and access to the area shall be controlled as required by WAC 246-221-120. This requirement shall not apply to areas using enclosed radiography systems (cabinets) which do not allow human access and in which the requirements of WAC 246-221-060 are met at the surface of the cabinet.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-095, filed 12/9/93, effective 1/9/94.]

WAC 246-227-120 Other records required. Each registrant conducting industrial radiography shall have the following documents, where applicable, available on site for inspection by the department:

- (1) Operating and emergency procedures;
- (2) Applicable regulations;

[Title 246 WAC—p. 314]

(3) Survey records required pursuant to WAC 246-227-050;

(4) Daily pocket dosimeter records for the period of operation at the site pursuant to WAC 246-227-080; and

(5) Proof of the latest calibration for specific instruments in use at the site pursuant to WAC 246-227-040.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-120, filed 12/9/93, effective 1/9/94.]

WAC 246-227-130 Special requirements for enclosed radiography. (1) Shielded room radiography systems and cabinet systems shall:

(a) Comply with all applicable requirements of this chapter and WAC 246-221-060;

(b) Be interlocked such that the exposure will terminate if a door or port accessible to individuals is opened during the exposure, except for those systems employing conveyor belts or sample ports; and

(c) Be tested for the proper operation of interlocks, high radiation area control devices or alarm systems, where applicable, at the beginning of each day of use. The results of these tests shall be recorded and maintained for three years.

(2) The registrant shall perform an evaluation, at intervals not to exceed one year, to determine conformance with this chapter and WAC 246-221-060. Records of each evaluation shall be maintained for three years.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-130, filed 12/9/93, effective 1/9/94.]

WAC 246-227-150 Special requirements for permanent radiographic installation. Permanent radiographic installations having high radiation area entrance controls of the types described in WAC 246-221-102(1) or where the high radiation area is locked to protect against unauthorized or accidental entry, shall also meet the following special requirements:

(1) Each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation to which this section applies shall have both visible and audible warning signals to warn of the presence of radiation. The visible signal shall be actuated by radiation whenever the x-rays are exposed. The audible signal shall be actuated when an attempt is made to enter the installation while x-rays are being generated.

(2) Both visible and audible alarm systems are required and shall be tested prior to the first use of a source in the installation and thereafter at intervals not to exceed three months. Records of the tests shall be kept for three years.

(3) The department shall review and approve, in advance of construction, plans for permanent radiographic installations whose construction had not commenced by the effective date of these regulations. Construction of the permanent facility shall be in accordance with the plans approved by the department.

(4) A physical radiation survey shall be conducted and results recorded following construction or major modification of the facility to be used in the installation. Radiography shall not be conducted if exposure levels in unrestricted areas are greater than 2mR in any hour. Any increase in output

(2003 Ed.)

capability of radiation machines will require resurvey of the installation prior to the conduct of industrial radiography.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-150, filed 12/9/93, effective 1/9/94.]

WAC 246-227-170 Appendix A—Minimum subjects to be covered in training radiographers. (1) Fundamentals of radiation safety:

- (a) Characteristics of ionizing radiation;
- (b) Units of radiation dose (mrem) and quantity of radioactivity (curie);
- (c) Hazards of exposure to radiation:
 - (i) Radiation protection standards;
 - (ii) Biological effects of radiation dose;
- (d) Levels of radiation from x-ray machines;
- (e) Methods of controlling radiation dose:
 - (i) Working time;
 - (ii) Working distances;
 - (iii) Shielding.
- (2) Radiation detection instrumentation to be used:
 - (a) Use of radiation survey instruments:
 - (i) Operation;
 - (ii) Calibration;
 - (iii) Limitations;
 - (b) Survey techniques;
 - (c) Use of personnel monitoring equipment:
 - (i) Film badges;
 - (ii) Pocket dosimeters;
 - (iii) Thermoluminescent dosimeters.
- (3) Operation and control of x-ray equipment.
- (4) The requirements of pertinent federal and state regulations.
- (5) The registrant's written operating and emergency procedures.
- (6) Case histories of radiography accidents.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-170, filed 12/9/93, effective 1/9/94.]

Chapter 246-228 WAC

RADIATION PROTECTION—ANALYTICAL X-RAY EQUIPMENT

WAC

246-228-001	Purpose and scope.
246-228-010	Definitions.
246-228-020	Equipment requirements.
246-228-030	Facility requirements.
246-228-040	Operating requirements.
246-228-050	Personnel requirements.

WAC 246-228-001 Purpose and scope. This chapter provides special requirements for analytical x-ray equipment. The requirements of this chapter are in addition to, and not in substitution for, applicable requirements in other chapters of these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-001, filed 12/27/90, effective 1/31/91; Order 1084, § 402-40-010, filed 1/14/76.]

(2003 Ed.)

WAC 246-228-010 Definitions. (1) "Analytical x-ray equipment" means equipment used for x-ray diffraction or fluorescence analysis.

(2) "Analytical x-ray system" means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

(3) "Fail-safe characteristics" mean a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

(4) "Local components" mean parts of an analytical x-ray system and include areas that are struck by x-rays such as radiation source housings, ports and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors, and shielding, but do not include power supplies, transformers, amplifiers, readout devices, and control panels.

(5) "Normal operating procedures" mean step-by-step instructions necessary to accomplish the analysis. These procedures shall include sample insertion and manipulation, equipment alignment, routine maintenance by the registrant, and data recording procedures which are related to radiation safety.

(6) "Open-beam configuration" means a mode of operation of an analytical x-ray system in which an individual could accidentally place some part of their body into the primary beam during normal operation if no further safety devices are incorporated.

(7) "Primary beam" means ionizing radiation which passes through an aperture of the source housing via a direct path from the x-ray tube located in the radiation source housing.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-40-020, filed 12/8/80; Order 1084, § 402-40-020, filed 1/14/76.]

WAC 246-228-020 Equipment requirements. (1) *Safety device.* A device which prevents the entry of any portion of an individual's body into the primary x-ray beam path, or which causes the beam to be shut off upon entry into its path, shall be provided for all open-beam configurations. A registrant or licensee may apply to the department for an exemption from the requirement of a safety device. Such application shall include:

(a) A description of the various safety devices that have been evaluated;

(b) The reason each of these devices cannot be used; and

(c) A description of the alternative methods that will be employed to minimize the possibility of an accidental exposure, including procedures to assure that operators and others in the area will be informed of the absence of safety devices.

(2) *Warning devices.* Open-beam configurations shall be provided with a readily discernible indication of:

(a) X-ray tube status (ON-OFF) located near the radiation source housing, if the primary beam is controlled in this manner and at or near the port and/or

(b) Shutter status (OPEN-CLOSED) located near each port on the radiation source housing, if the primary beam is controlled in this manner.

[Title 246 WAC—p. 315]

(c) Warning devices shall be labeled so that their purpose is easily identified and the devices shall be conspicuous at the beam port. On new equipment installed after January 1, 1976, warning devices shall have fail-safe characteristics.

(3) *Ports.* Unused ports on radiation source housings shall be secured in the closed position in a manner which will prevent casual opening. Such security requirement will be deemed met if the beam port cannot be opened without the use of tools not part of the closure for units installed after January 1, 1981.

(4) *Labeling.* All analytical x-ray equipment shall be labeled with a readily discernible sign or signs bearing the radiation symbol and the words:

(a) "CAUTION - HIGH INTENSITY X-RAY BEAM," or words having a similar intent, on the x-ray source housing; and

(b) "CAUTION RADIATION - THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED," or words having a similar intent, near any switch that energizes an x-ray tube if the radiation source is an x-ray tube; or

(c) "CAUTION - RADIOACTIVE MATERIAL," or words having a similar intent, on the source housing if the radiation source is a radionuclide.

(5) *Shutters.* On new equipment employing open-beam configurations installed after January 1, 1981, each port on the radiation source housing shall be equipped with a shutter that cannot be opened unless a collimator or a coupling has been connected to the port.

(6) *Warning lights.* An easily visible warning light labeled with the words "X-RAY ON," or words having a similar intent, shall be located:

(a) Near any switch that energizes an x-ray tube and near any x-ray port and shall be illuminated only when the tube is energized; or

(b) In the case of a radioactive source, near any switch that opens a housing shutter, and shall be illuminated only when the shutter is open.

(c) On equipment installed after January 1, 1981, warning lights shall have fail-safe characteristics.

(7) *Radiation source housing.* Each x-ray tube housing shall be so constructed that with all shutters closed the leakage radiation measured at a distance of 5 cm from its surface is not capable of producing a dose equivalent in excess of 2.5 mrem in one hour at any specified tube rating. If radioactive sources are used, corresponding dose limits shall not exceed 2.5 mrem per hour.

(8) *Generator cabinet.* Each x-ray generator shall be supplied with a protective cabinet which limits leakage radiation measured at a distance of 5 cm from its surface such that it is not capable of producing a dose equivalent in excess of 0.25 mrem in one hour.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-228-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-40-030, filed 12/8/80; Order 1084, § 402-40-030, filed 1/14/76.]

WAC 246-228-030 Facility requirements. (1) *Radiation levels.* The local components of an analytical x-ray system shall be located and arranged and shall include sufficient shielding or access control such that no radiation levels exist in any area surrounding the local component group which

could result in a dose to an individual present therein in excess of the dose equivalent limits given in WAC 246-221-060 of these regulations. For systems utilizing x-ray tubes, these levels shall be met at any specified tube rating.

(2) *Surveys.* Radiation surveys, as required by WAC 246-221-110 of all analytical x-ray systems, sufficient to show compliance with WAC 246-228-030(1), shall be performed:

(a) Upon installation of the equipment, and at least once every twelve months thereafter;

(b) Following any change in the initial arrangement, number, or type of local components in the system;

(c) Following any maintenance requiring the disassembly or removal of a local component in the system;

(d) During the performance of maintenance and alignment procedures if the procedures require the presence of a primary x-ray beam when any local component in the system is disassembled or removed;

(e) Any time a visual inspection of the local components in the system reveals an abnormal condition; and

(f) Whenever personnel monitoring devices required in WAC 246-228-050(2) show a significant increase over the previous monitoring period or the readings are approaching 1/10 of the hands and forearm limit specified in WAC 246-221-010.

(g) Radiation survey measurements shall not be required if a registrant or licensee can demonstrate compliance to the satisfaction of the department with WAC 246-228-030(1) in some other manner.

(3) *Posting.* Each area or room containing analytical x-ray equipment shall be conspicuously posted with a sign or signs bearing the radiation symbol and the words "CAUTION - X-RAY EQUIPMENT," or words having a similar intent.

(4) *Documentation of instruction.* Each facility shall maintain written documentation showing that compliance with WAC 246-228-050 has been met, and shall make such documentation available to the department upon request.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-228-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-228-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-40-040, filed 12/8/80; Order 1084, § 402-40-040, filed 1/14/76.]

WAC 246-228-040 Operating requirements. (1) *Procedures.* Routine operating procedures shall be written and available to all analytical x-ray equipment workers. No person shall be permitted to operate analytical x-ray equipment in any manner other than that specified in the procedures unless such person has obtained written approval of the radiation safety officer.

(2) *Bypassing.* No person shall bypass a safety device unless such person has obtained the written approval of the radiation safety officer. Such approval shall be for a specified period of time. When a safety device has been bypassed, a readily discernible sign bearing the words "SAFETY DEVICE NOT WORKING," or words having a similar intent, shall be placed on the radiation source housing. The requirements set forth in WAC 246-228-020(1) shall also be met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-228-040, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-40-050, filed 12/8/80; Order 1084, § 402-40-050, filed 1/14/76.]

WAC 246-228-050 Personnel requirements. (1)

Instruction. No person shall be permitted to operate or maintain analytical x-ray equipment unless such person has received instruction in and demonstrated competence as to:

- (a) Identification of radiation hazards associated with the use of the equipment;
- (b) Significance of the various radiation warning and safety devices incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in such cases;
- (c) Proper operating procedures for the equipment;
- (d) Symptoms of an acute localized exposure; and
- (e) Proper procedures for reporting an actual or suspected exposure.

(2) *Personnel monitoring.* Finger or wrist dosimetric devices shall be provided to and shall be used by:

(a) Analytical x-ray equipment workers using systems having an open-beam configuration and not equipped with a safety device; and

(b) Personnel maintaining analytical x-ray equipment if the maintenance procedures require the presence of a primary x-ray beam when any local component in the analytical x-ray system is disassembled or removed.

(c) Reported dose values shall not be used for the purpose of determining compliance with WAC 246-221-010 of these regulations unless evaluated by a qualified expert.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-228-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-050, filed 12/27/90, effective 1/31/91; Order 1084, § 402-40-060, filed 1/14/76.]

Chapter 246-229 WAC

RADIATION PROTECTION—PARTICLE ACCELERATORS

WAC

246-229-0001	Purpose.
246-229-0010	Definitions.
246-229-0020	How do I get approval for particle accelerator installation and use?
246-229-0030	What are the training requirements for particle accelerator use?
246-229-0040	Are there other requirements that apply to the use of particle accelerators?
246-229-0050	Who is authorized to terminate a registrant's use of a particle accelerator?
246-229-0060	What are the minimum requirements for particle accelerator installation?
246-229-0070	What are the minimum requirements for operating and emergency procedure documentation?
246-229-0080	What are the requirements for bypassing safety interlocks?
246-229-0090	What are the minimum requirements for particle accelerator use?
246-229-0100	What are the recordkeeping requirements for particle accelerator use?

(2003 Ed.)

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-229-001	Purpose and scope. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-001, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-010, filed 12/8/80; Order 1084, § 402-44-010, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-010	Registration requirements. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-010, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-010, filed 12/27/90, effective 1/31/91; Order 1084, § 402-44-020, filed 1/14/76.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-229-020	General requirements for the issuance of a registration for particle accelerators. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-020, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-030, filed 12/8/80; Order 1084, § 402-44-030, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-030	Human use of particle accelerators. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-040, filed 12/8/80; Order 1084, § 402-44-040, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-040	General provisions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-050, filed 12/8/80; Order 1084, § 402-44-050, filed 1/14/76.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-229-050	Limitations. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-060, filed 12/8/80; Order 1084, § 402-44-060, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-060	Shielding and safety design requirements. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-060, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-070, filed 12/8/80; Order 1084, § 402-44-070, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-070	Particle accelerator controls and interlock systems. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-080, filed 12/8/80; Order 1084, § 402-44-080, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-080	Warning devices. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-080, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-

[Title 246 WAC—p. 317]

- 011 (Order 1570), § 402-44-090, filed 12/8/80; Order 1084, § 402-44-090, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
- 246-229-090 Operating procedures. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-090, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-100, filed 12/8/80; Order 1084, § 402-44-100, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
- 246-229-100 Radiation monitoring requirements. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-110, filed 12/8/80; Order 1084, § 402-44-110, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
- 246-229-110 Ventilation systems. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-110, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-44-120, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-120, filed 12/8/80; Order 1084, § 402-44-120, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.

WAC 246-229-0001 Purpose. The purpose of this chapter is to regulate certain sources of ionizing radiation as required by RCW 70.98.050 and 70.98.080. This chapter provides for the registration and use of all particle accelerators installed and/or used in Washington state.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0001, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0010 Definitions. "Department" means the department of health.

"High radiation area" means any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 1 mSv (100 mrem) in one hour at 30 centimeters from any source of radiation or from any surface that the radiation penetrates. For purposes of these regulations, rooms or areas in which diagnostic x-ray systems are used for healing arts purposes are not considered high radiation areas.

"Particle accelerator" means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV.

"Qualified expert" means an individual who has demonstrated to the satisfaction of the department that he or she is knowledgeable, trained, and/or experienced to measure ionizing radiation, evaluate safety techniques, and/or advise appropriately on matters of radiation protection. The department reserves the right to recognize qualifications in specific areas of radiation protection.

"Radiation machine" means any device capable of producing ionizing radiation except those devices with radioactive materials as the only source of radiation.

"Radiation safety committee" means a registrant-appointed committee of at least three members to evaluate and approve all proposals for research, diagnostic, and therapeutic use of a particle accelerator. Committee members should include, at a minimum, persons with expertise related to the intended use of the accelerator, and a person experienced in depth dose calculations and radiation safety.

"Radiation safety officer" means a knowledgeable and responsible person assigned by the registrant who provides radiation protection expertise to facilities and users of radiation machines.

"Radioactive material" means any material that emits radiation energy spontaneously. A machine that emits x-rays is not considered a radioactive material.

"Registrant" means an owner or controller of a radiation machine who is responsible for the safe operation of the radiation machine.

"Restricted area" means any area with limited access for the purposes of protecting individuals from undue risks of radiation exposure. A restricted area cannot be a residential area; a building may contain both restricted areas and residential areas.

"Unrestricted area" means any area freely available to the public, workers, or other persons; and where a person may receive less than 1 mSv (100 mrem) per year or be subject to any dose rate less than 20 µSv/hr (2 mrem/hr).

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0010, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0020 How do I get approval for particle accelerator installation and use? (1) Anyone installing or using particle accelerators in Washington state must get department approval by registering with the department according to chapter 246-224 WAC, Radiation protection—Radiation machine assembly and registration, prior to installation or use of the particle accelerator.

- (2) A registrant must submit the following information:
- (a) A membership list showing the establishment of a radiation safety committee;
 - (b) An identified radiation safety officer;
 - (c) A qualified expert's radiation shielding and safety plan review for approval according to chapter 246-225 WAC, Radiation protection—X-rays in the healing arts; and
 - (d) Operating and emergency procedures.
- (3) If the particle accelerator is intended for human use:
- (a) The designated user must be a physician with training and experience in deep therapy techniques or in the use of particle accelerators to treat humans; and
 - (b) The registrant must appoint a radiation safety committee.

(4) To submit registration and questions, contact the department by phone or mail at:

Washington State Health Department
Division of Radiation Protection
Attn: X-Ray Registration
P.O. Box 47827
Olympia, WA 98504-7827
360-236-3230 or 1-800-299-XRAY

- (5) A facility may not operate a particle accelerator:
- (a) Without approval from the department; and

(b) If any applicable requirement in this chapter is not met.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0020, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0030 What are the training requirements for particle accelerator use? (1) The registrant must:

(a) Ensure training for operators to use the particle accelerator that meets the requirements of subsection (2) of this section; and

(b) Maintain training records that demonstrate compliance with the requirements of subsection (2) of this section for two years after the last employment or operation date for the operator.

(2) At a minimum, operators must:

(a) Demonstrate radiation safety expertise and other skills required by the facility training program;

(b) Understand applicable requirements and the registrant's operating and emergency procedures; and

(c) Demonstrate competence to use the particle accelerator, related equipment, and survey instruments, which are required by the operator's assignment.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0030, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0040 Are there other requirements that apply to the use of particle accelerators? (1) Registrants must meet the radiation standards of chapter 246-220 WAC, Radiation protection—General provisions; chapter 246-221 WAC, Radiation protection standards; and chapter 246-222 WAC, Radiation protection—Worker rights; for public, operator, and user protection.

(2) Depending on the installation, type of machine, and intended use, registrants may also need to meet:

(a) Industrial radiographic operations, chapters 246-243 and 246-227 WAC;

(b) X-ray in the healing arts, chapter 246-225 WAC; and

(c) Medical therapy, chapter 246-240 WAC.

(3) Registrants using particle accelerators to produce radioactive material must meet the requirements of chapter 246-232 WAC, Radioactive material—Licensing applicability; and chapter 246-235 WAC, Radioactive materials—Specific licenses.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0040, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0050 Who is authorized to terminate a registrant's use of a particle accelerator? The radiation safety committee, the radiation safety officer of the facility, and the department are authorized to terminate the particle accelerator operations at a facility if the action is determined necessary to protect health and minimize danger to public health and safety or property.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0050, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0060 What are the minimum requirements for particle accelerator installation? (1) Shielding and safety design. The installation must include:

(a) Primary and secondary radiation barriers to comply with the radiation protection standards of WAC 246-221-010 and 246-221-060.

(b) If necessary, a ventilation system designed to limit exposure to airborne radioactive materials as follows:

(i) For restricted areas, limits are specified in WAC 246-221-040;

(ii) For unrestricted areas, limits are specified in WAC 246-221-070; and/or

(iii) For unrestricted areas, the facility must prohibit releases, venting, or otherwise discharging airborne radioactive material which exceeds the limits of WAC 246-247-040 or 246-221-290 Appendix A - Table II, unless authorized in WAC 246-221-180 or 246-221-070(2). To calculate, concentrations may be averaged over a period not greater than one year. Every reasonable effort should be made to prohibit releases of radioactive material to unrestricted areas.

(2) Controls, instrumentation, and readouts. All controls, instrumentation, and readouts must be clearly identified and functional on the particle accelerator control console.

(3) Safety interlocks. All entrances into a target room or other high radiation area must have interlocks that shut down the machine if a door is opened (e.g., barrier penetrated) during irradiation.

(a) Manual reset. If the interlock engages (shuts the machine off), the machine must stay off until manually reset at the console.

(b) Independent function. Each safety interlock must function independently of any other safety interlocks.

(c) Failsafe. All safety interlocks must ensure that any defect or component failure in the interlock system prevents operation of the accelerator.

(4) Emergency power cutoff switch system. An identifiable "scram" button or emergency power cutoff switch which stops irradiation must exist in all high radiation areas. If the switch is engaged (shuts off the machine), the system must prohibit the accelerator from restarting until the switch in the room is reset and the main console restarted manually. Use of this system is limited to emergency situations.

(5) High radiation area warning devices. For areas designated as high radiation areas, the registrant must:

(a) Identify barriers (including temporary) for and pathways to high radiation areas according to WAC 246-221-120, Caution signs and labels.

(b) Except inside treatment rooms in facilities designed for human exposure, install easily observable warning lights at area entrances that activate when radiation is being produced.

(c) Except in facilities designed for human exposure, install an audible warning device which activates for fifteen seconds prior to accelerator use in all high radiation areas. Instruct all personnel in the area as to the signal's meaning.

(d) Except in facilities designed for human exposure, install continuous radiation detection monitoring equipment. The equipment must be electrically independent of the accelerator control and interlock systems and be calibrated every six months at a minimum. The equipment must provide:

(i) A remote and local readout; and

(ii) Visual and/or audible alarms at the control panel, entrances to high radiation areas, and other appropriate locations.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0060, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0070 What are the minimum requirements for operating and emergency procedure documentation? At a minimum, the procedures must include instruction on:

- (1) Securing the accelerator to prevent unauthorized use.
- (2) Operating the accelerator.
- (3) Responding to an emergency involving the accelerator.
- (4) Performing safety and warning device (including interlocks) checks at least every three months.
- (5) Performing radiation surveys.
- (6) Performing monitoring equipment calibration (if applicable).
- (7) Recordkeeping and/or documentation.
- (8) Bypassing safety interlocks.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0070, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0080 What are the requirements for bypassing safety interlocks? Bypassing a safety interlock or interlocks is allowed only if:

- (1) Authorized by the radiation safety committee and/or radiation safety officer;
- (2) Recorded in a permanent log and a notice posted at the accelerator control console; and
- (3) The bypass procedure is terminated as soon as possible.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0080, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0090 What are the minimum requirements for particle accelerator use? The minimum requirements for the registrant to use a particle accelerator are to:

- (1) Register the accelerator with the department;
- (2) Submit plan review/shielding design to the department and receive written approval;
- (3) Train operators and users;
- (4) Complete a qualified expert's radiation protection survey of the room/area initially and after any changes in shielding, equipment, or occupancy of adjacent areas;
- (5) Provide appropriate portable radiation monitoring equipment that is operable and tested daily, and calibrated every six months, or after any service/repair;
- (6) Develop operating and emergency procedures and keep a copy of the current procedures at the accelerator control panel; and
- (7) If applicable, provide the means and guidance to determine airborne particulate radioactivity present in areas of airborne hazards, and/or particulate radiation contamination (smear surveys) in target and other pertinent areas.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0090, filed 6/27/02, effective 7/28/02.]

[Title 246 WAC—p. 320]

WAC 246-229-0100 What are the recordkeeping requirements for particle accelerator use?

Records	Retention time
Operator training and qualifications	Two years past last employment/operation
Safety and warning device checks	Two years
Area radiation monitors	Two years (if necessary)
Instrumentation tests	Two years
Smear results	Two years (if necessary)
Qualified expert radiation protection surveys	Life of the accelerator
Electrical circuit diagrams	Life of the accelerator
Permanent log of bypassing interlocks	Life of the accelerator

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0100, filed 6/27/02, effective 7/28/02.]

Chapter 246-231 WAC PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

WAC

APPENDIX A—DETERMINATION OF A1 AND A2

246-231-001	Purpose and scope.
246-231-005	Requirement for license.
246-231-010	Definitions.
246-231-030	Transportation of licensed material.
246-231-040	Exemptions.
246-231-050	General licenses for carriers.
246-231-060	General license—NRC-approved package.
246-231-070	Previously approved package.
246-231-080	General license—DOT specification container.
246-231-090	General license—Use of foreign approved package.
246-231-100	Applicability of operating controls and procedures.
246-231-110	Routine determinations.
246-231-120	Air transport of plutonium.
246-231-130	Opening instructions.
246-231-140	Advance notification of shipment of irradiated reactor fuel and nuclear waste.
246-231-200	Appendix A—Determination of A1 and A2.

APPENDIX A—DETERMINATION OF A1 AND A2

WAC 246-231-001 Purpose and scope. (1) This chapter establishes requirements for packaging, preparation for shipment, and transportation of radioactive material.

(2) These rules are in addition to applicable requirements of the United States Nuclear Regulatory Commission (NRC), the United States Department of Transportation (DOT), the U.S. Postal Service¹, and other requirements of Title 246 WAC.

(3) The regulations in this chapter apply to any licensee authorized by specific or general license issued by the department to receive, possess, use, or transfer licensed material, if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the license, or transports that material on public highways. No provision of this chapter authorizes possession of licensed material.

¹ *Postal Service Manual (Domestic Mail Manual)*, section 124.3, which is incorporated by reference at 39 CFR 111.1.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-001, filed 7/21/99, effective 8/21/99.]

WAC 246-231-005 Requirement for license. No person shall deliver radioactive material to a carrier for transport or transport radioactive material except as authorized in a general or specific license issued by the department, or as exempted in this chapter.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-005, filed 7/21/99, effective 8/21/99.]

WAC 246-231-010 Definitions. The following terms are as defined here for the purpose of this chapter. To ensure compatibility with international transportation standards, all limits in this chapter are given in terms of dual units: The International System of Units (SI) followed or preceded by U.S. standard or customary units. The U.S. customary units are not exact equivalents, but are rounded to a convenient value, providing a functionally equivalent unit. For the purpose of this chapter, either unit may be used.

(1) "A1" means the maximum activity of special form radioactive material permitted in a Type A package.

(2) "A2" means the maximum activity of radioactive material, other than special form, LSA and SCO material, permitted in a Type A package. These values are either listed in WAC 246-231-200, Table A-1, or may be derived in accordance with the procedure prescribed in WAC 246-231-200.

(3) "Carrier" means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

(4) "Certificate holder" means a person who has been issued a certificate of compliance or other package approval by the U.S. Nuclear Regulatory Commission (USNRC).

(5) "Close reflection by water" means immediate contact by water of sufficient thickness for maximum reflection of neutrons.

(6) "Containment system" means the assembly of components of the packaging intended to retain the radioactive material during transport.

(7) "Conveyance" means:

(a) For transport by public highway or rail any transport vehicle or large freight container;

(b) For transport by water any vessel, or any hold, compartment, or defined deck area of a vessel including any transport vehicle on board the vessel; and

(c) For transport by aircraft any aircraft.

(8) "Exclusive use" means the sole use by a single consignor of a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. The consignor and the carrier must ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. The consignor must issue specific instructions, in writing, for maintenance of exclusive use shipment controls, and include them with the shipping paper information provided to the carrier by the consignor.

(9) "Fissile material" means plutonium-238, plutonium-239, plutonium-241, uranium-233, uranium-235, or any com-

bination of these radionuclides. Unirradiated natural uranium and depleted uranium, and natural uranium or depleted uranium that has been irradiated in thermal reactors only are not included in this definition. Certain exclusions from fissile material controls are provided in USNRC regulations 10 CFR 71.53.

(10) "Highway route controlled quantity" means a quantity within a single package which exceeds:

(a) 3,000 times the A1 or A2 quantity specified in WAC 246-231-200; or

(b) 1,000 TBq (27,000 Ci) whichever is least.

(11) "Licensed material" means radioactive material received, possessed, used, or transferred under a general or specific license issued by the department pursuant to the regulations in this chapter.

(12) "Low specific activity (LSA) material" means radioactive material with limited specific activity that satisfies the descriptions and limits set forth below. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. LSA material must be in one of three groups:

(a) LSA-I.

(i) Ores containing only naturally occurring radionuclides (e.g., uranium, thorium) and uranium or thorium concentrates of such ores; or

(ii) Solid unirradiated natural uranium or depleted uranium or natural thorium or their solid or liquid compounds or mixtures; or

(iii) Radioactive material, other than fissile material, for which the A2 value is unlimited; or

(iv) Mill tailings, contaminated earth, concrete, rubble, other debris, and activated material in which the radioactive material is essentially uniformly distributed, and the average specific activity does not exceed $1E-6$ A2/g.

(b) LSA-II.

(i) Water with tritium concentration up to 0.8 TBq/liter (20.0 Ci/liter); or

(ii) Material in which the radioactive material is distributed throughout, and the average specific activity does not exceed $1E-4$ A2/g for solids and gases, and $1E-5$ A2/g for liquids.

(c) LSA-III. Solids (e.g., consolidated wastes, activated materials) in which:

(i) The radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.); and

(ii) The radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble material, so that, even under loss of packaging, the loss of radioactive material per package by leaching, when placed in water for seven days, would not exceed 0.1 A2; and

(iii) The average specific activity of the solid does not exceed $2E-3$ A2/g.

(13) "Low toxicity alpha emitters" means natural uranium, depleted uranium, natural thorium; uranium-235, uranium-238, thorium-232, thorium-228 or thorium-230 when contained in ores or physical or chemical concentrates or tailings; or alpha emitters with a half-life of less than ten days.

(14) "Maximum normal operating pressure" means the maximum gauge pressure that would develop in the containment system in a period of one year under the heat condition specified in USNRC regulations Title 10 CFR 71.71 (c)(1), in the absence of venting, external cooling by an ancillary system, or operational controls during transport.

(15) "Natural thorium" means thorium with the naturally occurring distribution of thorium isotopes (essentially 100 weight percent thorium-232).

(16) "Normal form radioactive material" means radioactive material that has not been demonstrated to qualify as "special form radioactive material."

(17) "Nuclear waste" as used in WAC 246-231-140 means any quantity of radioactive material (not including radiography sources being returned to the manufacturer) required to be in Type B packaging while transported to, through, or across state boundaries to a disposal site, or to a collection point for transport to a disposal site. Nuclear waste, as used in these regulations, is a special classification of radioactive waste.

(18) "Optimum interspersed hydrogenous moderation" means the presence of hydrogenous material between packages to such an extent that the maximum nuclear reactivity results.

(19) "Package" means the packaging together with its radioactive contents as presented for transport.

(a) "Fissile material package" means a fissile material packaging together with its fissile material contents.

(b) "Type B package" means a Type B packaging together with its radioactive contents. On approval by the NRC, a Type B package design is designated as B(U) unless the package has a maximum normal operating pressure of more than 700 kPa (100 lb/in²) gauge or a pressure relief device that would allow the release of radioactive material to the environment under the tests specified in USNRC regulations Title 10 CFR 71.73 (hypothetical accident conditions), in which case it will receive a designation B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval of international shipments. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, see DOT regulations in 49 CFR Part 173. A Type B package approved before September 6, 1983, was designated only as Type B. Limitations on its use are specified in WAC 246-231-070.

(20) "Packaging" means the assembly of components necessary to ensure compliance with the packaging requirements of this chapter. It may consist of one or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The vehicle, tie-down system, and auxiliary equipment may be designated as part of the packaging.

(21) "Special form radioactive material" means radioactive material that satisfies the following conditions:

(a) It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

(b) The piece or capsule has at least one dimension not less than 5 mm (0.2 in); and

(c) It satisfies the requirements of USNRC regulations. A special form encapsulation designed in accordance with the USNRC requirements in effect on June 30, 1983, (see 10 CFR Part 71, revised as of January 1, 1983), and constructed before July 1, 1985, and a special form encapsulation designed in accordance with the requirements of the USNRC in effect on March 31, 1996, (see 10 CFR Part 71, revised as of January 1, 1983), and constructed before April 1, 1998, may continue to be used. Any other special form encapsulation must meet the specifications of this definition.

(22) "Specific activity" of a radionuclide means the radioactivity of the radionuclide per unit mass of that nuclide. The specific activity of a material in which the radionuclide is essentially uniformly distributed is the radioactivity per unit mass of the material.

(23) "State" means a state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(24) "Surface contaminated object (SCO)" means a solid object that is not itself classed as radioactive material, but which has radioactive material distributed on any of its surfaces. SCO must be in one of two groups with surface activity not exceeding the following limits:

(a) SCO-I: A solid object on which:

(i) The nonfixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4 Bq/cm² (1E-4 microcurie/cm²) for beta and gamma and low toxicity alpha emitters, or 0.4 Bq/cm² (1E-5 microcurie/cm²) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4E+4 Bq/cm² (1.0 microcurie/cm²) for beta and gamma and low toxicity alpha emitters, or 4E+3 Bq/cm² (0.1 microcurie/cm²) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4E+4 Bq/cm² (1 microcurie/cm²) for beta and gamma and low toxicity alpha emitters, or 4E+3 Bq/cm² (0.1 microcurie/cm²) for all other alpha emitters.

(b) SCO-II: A solid object on which the limits for SCO-I are exceeded and on which:

(i) The nonfixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 400 Bq/cm² (1E-2 microcurie/cm²) for beta and gamma and low toxicity alpha emitters or 40 Bq/cm² (1E-3 microcurie/cm²) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8E+5 Bq/cm² (20 microcuries/cm²) for beta and gamma and low toxicity alpha emitters, or 8E+4 Bq/cm² (2 microcuries/cm²) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8E+5 Bq/cm² (20 microcuries/cm²) for beta and gamma and low toxicity alpha emitters, or 8E+4 Bq/cm² (2 microcuries/cm²) for all other alpha emitters.

(25) "Transport index" means the dimensionless number (rounded up to the next tenth) placed on the label of a package, to designate the degree of control to be exercised by the carrier during transportation. The transport index is determined as follows:

(a) For nonfissile material packages, the number determined by multiplying the maximum radiation level in millisievert (mSv) per hour at one meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at one meter (3.3 ft)); or

(b) For fissile material packages, the number determined by multiplying the maximum radiation level in millisievert per hour at one meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at one meter (3.3 ft)), or, for criticality control purposes, the number obtained as described in USNRC regulations 10 CFR 71.59, whichever is larger.

(26) "Type A quantity" means a quantity of radioactive material, the aggregate radioactivity of which does not exceed A1 for special form radioactive material, or A2, for normal form radioactive material, where A1 and A2 are given in Table A-1 of WAC 246-231-200, or may be determined by procedures described in WAC 246-231-200.

(27) "Type B quantity" means a quantity of radioactive material greater than a Type A quantity.

(28) Uranium—natural, depleted, enriched.

(a) "Natural uranium" means uranium with the naturally occurring distribution of uranium isotopes (approximately 0.711 weight percent uranium-235, and the remainder by weight essentially uranium-238).

(b) "Depleted uranium" means uranium containing less uranium-235 than the naturally occurring distribution of uranium isotopes.

(c) "Enriched uranium" means uranium containing more uranium-235 than the naturally occurring distribution of uranium isotopes.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-010, filed 7/21/99, effective 8/21/99.]

WAC 246-231-030 Transportation of licensed material. (1) Each licensee who transports licensed material outside the site of usage, as specified in the license issued by the department, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transport.

(a) The licensee shall particularly note DOT regulations in the following areas:

(i) Packaging—49 CFR Part 173: Subparts A and B and I.

(ii) Marking and labeling—49 CFR Part 172: Subpart D, Secs. 172.400 through 172.407, Secs. 172.436 through 172.440, and subpart E.

(iii) Placarding—49 CFR Part 172: Subpart F, especially Secs. 172.500 through 172.519, 172.556, and appendices B and C.

(iv) Accident reporting—49 CFR Part 171: Secs. 171.15 and 171.16.

(2003 Ed.)

(v) Shipping papers and emergency information—49 CFR Part 172: Subparts C and G.

(vi) Hazardous material employee training—49 CFR Part 172: Subpart H.

(vii) Hazardous material shipper/carrier registration—49 CFR Part 107: Subpart G.

(b) The licensee shall also note DOT regulations pertaining to the following modes of transportation:

(i) Rail—49 CFR Part 174: Subparts A through D and K.

(ii) Air—49 CFR Part 175.

(iii) Vessel—49 CFR Part 176: Subparts A through F and M.

(iv) Public Highway—49 CFR Part 177 and Parts 390 through 397.

(2) If DOT regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of the DOT specified in paragraph (1) of this section to the same extent as if the shipment or transportation were subject to DOT regulations. A request for modification, waiver, or exemption from those requirements, and any notification referred to in those requirements, must be filed with, or made to, the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-030, filed 7/21/99, effective 8/21/99.]

WAC 246-231-040 Exemptions. (1) Common and contract carriers, freight forwarders, and warehouse workers who are subject to the rules and regulations of the United States Department of Transportation (49 CFR Parts 170 through 189) or the United States Postal Service (Domestic Mail Manual, Section 124.3 incorporated by reference, 39 CFR 111.11 (1974) are exempt from this chapter to the extent that they transport or store radioactive material in the regular course of their carriage for another or storage incident thereto. Common and contract carriers who are not subject to the rules and regulations of the United States Department of Transportation or United States Postal Service are subject to WAC 246-231-005 and other applicable sections of these regulations.

(2) Any licensee who delivers radioactive material to a carrier for transport, where such transport is subject to the regulations of the United States Postal Service, is exempt from the provisions of WAC 246-231-005.

(3) Physicians as defined in WAC 246-220-010, are exempt from the requirements of this chapter only to the extent that they transport radioactive material for emergency use in the practice of medicine.

(4) A licensee is exempt from all requirements of this chapter with respect to shipment or carriage of a package containing radioactive material having a specific activity not greater than 70 Bq/g (0.002 uCi/g).

(5) A licensee is exempt from all requirements of this chapter, other than WAC 246-231-030 and 246-231-120, with respect to shipment or carriage of the following packages, provided the packages contain no fissile material:

(a) A package containing no more than a Type A quantity of radioactive material;

[Title 246 WAC—p. 323]

(b) A package in which the only radioactive material is low specific activity (LSA) material or surface contaminated objects (SCO), provided the external radiation level at 3 m from the unshielded material or objects does not exceed 10 mSv/h (1 rem/h); or

(c) A package transported within locations within the United States which contains only americium or plutonium in special form with an aggregate radioactivity not to exceed 20 curies.

(6) A licensee is exempt from all requirements of this chapter, other than WAC 246-231-030 and 246-231-120, with respect to shipment or carriage of low-specific-activity (LSA) material in group LSA-I, or surface contaminated objects (SCOs) in group SCO-I.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-040, filed 7/21/99, effective 8/21/99.]

WAC 246-231-050 General licenses for carriers. (1)

A general license is hereby issued to any common or contract carrier not exempted under WAC 246-231-040 to receive, possess, transport and store radioactive material in the regular course of their carriage for another or storage incident thereto, provided the transportation and storage is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation.

(2) A general license is hereby issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, shipping papers, and incident reporting. Any notification of incidents referred to in those requirements shall be filed with, or made to, the department.

(3) Persons who transport radioactive material pursuant to the general licenses of subsection (1) or (2) of this section are exempt from the requirements of chapters 246-221 and 246-222 WAC to the extent that they transport radioactive material.

(4) A general license is hereby issued to deliver radioactive material to a carrier¹ for transport provided that:

(a) The licensee complies with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation insofar as such regulations relate to the packaging of radioactive material, to shipping papers, and to the monitoring, marking and labeling of those packages.

(b) The licensee has established procedures for opening and closing packages in which radioactive material is transported to provide safety and to assure that, prior to the delivery to a carrier for transport, each package is properly closed for transport.

(c) Prior to delivery of a package to a carrier for transport, the licensee shall assure that any special instructions needed to safely open the package are sent to or have been made available to the consignee.

(d) In addition to the requirements of the United States Department of Transportation, each package of Type A or B

quantity radioactive material prepared for shipment must have the innermost container labeled as to the isotope, chemical form, number of bequerels or subunits thereof, and date of determination of activity and each innermost container shall be tested to assure that the container is properly sealed and that contamination which would cause undue hazard to public health and safety or property is not present prior to transportation. This requirement does not apply to properly packaged shipments of radioactive waste consigned to a commercial low level radioactive waste disposal facility.

Note 1- For the purpose of this regulation, licensees who transport their own licensed material as a private carrier are considered to have delivered such material to a carrier for transport.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-050, filed 7/21/99, effective 8/21/99.]

WAC 246-231-060 General license—NRC-approved package. (1) A general license is hereby issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the department or NRC.

(2) This general license applies only to a licensee who has a quality assurance program approved by the USNRC.

(3) This general license applies only to a licensee who:

(a) Has a copy of the certificate of compliance, or other approval of the package, and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the actions to be taken before shipment;

(b) Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of the USNRC; and

(c) Submits in writing to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, before the licensee's first use of the package, the licensee's name and license number and the package identification number specified in the package approval.

(4) This general license applies only when the package approval authorizes use of the package under this general license.

(5) For a Type B or fissile material package, the design of which was approved by NRC before April 1, 1996, the general license is subject to the additional restrictions of NRC regulations 10 CFR 71.13.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-060, filed 7/21/99, effective 8/21/99.]

WAC 246-231-070 Previously approved package. (1) A Type B package previously approved by NRC but not designated as B(U) or B(M) in the identification number of the NRC Certificate of Compliance, may be used under the general license of WAC 246-231-060 with the following additional conditions:

(a) Fabrication of the packaging was satisfactorily completed by August 31, 1986, as demonstrated by application of its model number in accordance with WAC 246-231-100 (2)(c);

(b) A package used for a shipment to a location outside the United States is subject to multilateral approval, as defined in DOT regulations at 49 CFR 173.403; and

(c) A serial number that uniquely identifies each packaging which conforms to the approved design is assigned to, and legibly and durably marked on, the outside of each packaging.

(2) A Type B(U) package, a Type B(M) package, a low specific activity (LSA) material package or a fissile material package, previously approved by the NRC but without the designation "-85" in the identification number of the NRC Certificate of Compliance, may be used under the general license of WAC 246-231-060 with the following additional conditions:

(a) Fabrication of the package is satisfactorily completed by April 1, 1999, as demonstrated by application of its model number in accordance with WAC 246-231-100 (2)(c);

(b) A package used for a shipment to a location outside the United States is subject to multilateral approval as defined in DOT regulations at 49 CFR 173.403; and

(c) A serial number which uniquely identifies each packaging which conforms to the approved design is assigned to and legibly and durably marked on the outside of each packaging.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-070, filed 7/21/99, effective 8/21/99.]

WAC 246-231-080 General license—DOT specification container. (1) A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a specification container for fissile material or for a Type B quantity of radioactive material as specified in DOT regulations at 49 CFR Parts 173 and 178.

(2) This general license applies only to a licensee who has a quality assurance program approved by the NRC as satisfying the provisions of subpart H of the NRC regulations, 10 CFR 71.

(3) This general license applies only to a licensee who:

(a) Has a copy of the specification; and

(b) Complies with the terms and conditions of the specification and the applicable requirements of subparts A, G, and H of NRC regulations 10 CFR 71.

(4) This general license is subject to the limitation that the specification container may not be used for a shipment to a location outside the United States, except by multilateral approval, as defined in DOT regulations at 49 CFR 173.403.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-080, filed 7/21/99, effective 8/21/99.]

WAC 246-231-090 General license—Use of foreign approved package. (1) A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a package the design of which has been approved in a foreign national competent authority certificate that has been revalidated by DOT as meeting the applicable requirements of 49 CFR 171.12.

(2) Except as otherwise provided in this section, the general license applies only to a licensee who has a quality assurance program approved by the USNRC.

(2003 Ed.)

(3) This general license applies only to shipments made to or from locations outside the United States.

(4) This general license applies only to a licensee who:

(a) Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate, relating to the use and maintenance of the packaging and to the actions to be taken before shipment; and

(b) Complies with the terms and conditions of the certificate and revalidation, and with the applicable requirements of the USNRC.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-090, filed 7/21/99, effective 8/21/99.]

WAC 246-231-100 Applicability of operating controls and procedures. (1) A licensee subject to this chapter, who, under a general or specific license, transports licensed material or delivers licensed material to a carrier for transport, shall also comply with the requirements of NRC regulations 10 CFR 71 subpart G, with the quality assurance requirements of subpart H, and with the general provisions of subpart A.

(2) Before the first use of any packaging for the shipment of licensed material:

(a) The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce the effectiveness of the packaging;

(b) Where the maximum normal operating pressure will exceed 35 kPa (5 lbf/in²) gauge, the licensee shall test the containment system at an internal pressure at least fifty percent higher than the maximum normal operating pressure, to verify the capability of that system to maintain its structural integrity at that pressure; and

(c) The licensee shall conspicuously and durably mark the packaging with its model number, serial number, gross weight, and a package identification number assigned by NRC. Before applying the model number, the licensee shall determine that the packaging has been fabricated in accordance with the design approved by the U.S. Nuclear Regulatory Commission.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-100, filed 7/21/99, effective 8/21/99.]

WAC 246-231-110 Routine determinations. Before each shipment of licensed material, the licensee shall ensure that the package with its contents satisfies the applicable requirements of this section and of the license. The licensee shall determine that:

(1) The package is proper for the contents to be shipped;

(2) The package is in unimpaired physical condition except for superficial defects such as marks or dents;

(3) Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;

(4) Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;

(5) Any pressure relief device is operable and set in accordance with written procedures;

(6) The package has been loaded and closed in accordance with written procedures;

[Title 246 WAC—p. 325]

(7) For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;

(8) Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of NRC regulations 10 CFR 71.45;

(9) The level of nonfixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable, and within the limits specified in DOT regulations in 49 CFR 173.443;

(10) External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in NRC regulations 10 CFR 71.47 at any time during transportation; and

(11) Accessible package surface temperatures will not exceed the limits specified in NRC regulations 10 CFR 71.43(g) at any time during transportation.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-110, filed 7/21/99, effective 8/21/99.]

WAC 246-231-120 Air transport of plutonium. (1) Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this part or included indirectly by citation of 49 CFR chapter I, as may be applicable, the licensee shall assure that plutonium in any form, whether for import, export, or domestic shipment, is not transported by air or delivered to a carrier for air transport unless:

(a) The plutonium is contained in a medical device designed for individual human application; or

(b) The plutonium is contained in a material in which the specific activity is not greater than 0.002 uCi/g (70 Bq/g) of material and in which the radioactivity is essentially uniformly distributed; or

(c) The plutonium is shipped in a single package containing no more than an A2 quantity of plutonium in any isotope or form, and is shipped in accordance with WAC 246-231-030; or

(d) The plutonium is shipped in a package specifically authorized for the shipment of plutonium by air in the Certificate of Compliance for that package issued by the U.S. Nuclear Regulatory Commission.

(2) Nothing in subsection (1) of this section is to be interpreted as removing or diminishing the requirements of NRC regulations 10 CFR 73.24.

(3) For a shipment of plutonium by air which is subject to subsection (1)(d) of this section, the licensee shall, through special arrangement with the carrier, require compliance with 49 CFR 175.704, U.S. Department of Transportation regulations applicable to the air transport of plutonium.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-120, filed 7/21/99, effective 8/21/99.]

WAC 246-231-130 Opening instructions. Before delivery of a package to a carrier for transport, the licensee shall ensure that any special instructions needed to safely open the package have been sent to, or otherwise made available to, the consignee for the consignee's use in accordance with WAC 246-221-160.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-130, filed 7/21/99, effective 8/21/99.]

WAC 246-231-140 Advance notification of shipment of irradiated reactor fuel and nuclear waste. (1) As specified in subsections (2), (3), and (4) of this section, each licensee shall provide advance notification to the governor of a state, or the governor's designee, of the shipment of licensed material, through, or across the boundary of the state, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.

(2) Advance notification is required under this section for shipments of irradiated reactor fuel in quantities less than that subject to advance notification requirements of NRC regulations 10 CFR 73.37(f). Advance notification is also required under this section for shipment of licensed material, other than irradiated fuel, meeting the following three conditions:

(a) The licensed material is required by this section to be in Type B packaging for transportation;

(b) The licensed material is being transported to or across a state boundary en route to a disposal facility or to a collection point for transport to a disposal facility; and

(c) The quantity of licensed material in a single package exceeds the least of the following:

(i) 3000 times the A1 value of the radionuclides as specified in WAC 246-231-200, Table A-1 for special form radioactive material;

(ii) 3000 times the A2 value of the radionuclides as specified in WAC 246-231-200, Table A-1 for normal form radioactive material; or

(iii) 1000 TBq (27,000 Ci).

(3) Procedures for submitting advance notification.

(a) The notification must be made in writing to the office of each appropriate governor or governor's designee and to the Administrator of the appropriate NRC Regional Office listed in Appendix A of NRC regulations 10 CFR Part 73.

(b) A notification delivered by mail must be postmarked at least seven days before the beginning of the seven-day period during which departure of the shipment is estimated to occur.

(c) A notification delivered by messenger must reach the office of the governor or of the governor's designee at least four days before the beginning of the seven-day period during which departure of the shipment is estimated to occur.

(i) A list of the names and mailing addresses of the governors' designees receiving advance notification of transportation of nuclear waste was published in the *Federal Register* on June 30, 1995, (60 FR 34306).

(ii) The list will be published annually in the *Federal Register* on or about June 30 to reflect any changes in information.

(iii) A list of the names and mailing addresses of the governors' designees is available on request from the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(d) The licensee shall retain a copy of the notification as a record for three years.

(4) Information to be furnished in advance notification of shipment. Each advance notification of shipment of irradiated reactor fuel or nuclear waste must contain the following information:

(a) The name, address, and telephone number of the shipper, carrier, and receiver of the irradiated reactor fuel or nuclear waste shipment;

(b) A description of the irradiated reactor fuel or nuclear waste contained in the shipment, as specified in the regulations of DOT in 49 CFR 172.202 and 172.203(d);

(c) The point of origin of the shipment and the seven-day period during which departure of the shipment is estimated to occur;

(d) The seven-day period during which arrival of the shipment at state boundaries is estimated to occur;

(e) The destination of the shipment, and the seven-day period during which arrival of the shipment is estimated to occur; and

(f) A point of contact, with a telephone number, for current shipment information.

(5) Revision notice. A licensee who finds that schedule information previously furnished to a governor or governor's designee, in accordance with this section, will not be met, shall telephone a responsible individual in the office of the governor of the state or of the governor's designee and inform that individual of the extent of the delay beyond the schedule originally reported. The licensee shall maintain a record of the name of the individual contacted for three years.

(6) Cancellation notice.

(a) Each licensee who cancels an irradiated reactor fuel or nuclear waste shipment for which advance notification has been sent shall send a cancellation notice to the governor of each state or to the governor's designee previously notified, and to the Administrator of the appropriate NRC Regional Office listed in Appendix A of USNRC regulations 10 CFR 73.

(b) The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being canceled. The licensee shall retain a copy of the notice as a record for three years.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-231-140, filed 7/21/99, effective 8/21/99.]

WAC 246-231-200 Appendix A—Determination of A1 and A2. I. Values of A1 and A2 for individual radionuclides, which are the bases for many activity limits elsewhere in these regulations are given in Table A-1. The curie (Ci) values specified are obtained by converting from the Terabecquerel (TBq) figure. The curie values are expressed to three significant figures to assure that the difference in the TBq and Ci quantities is one tenth of one percent or less. Where values of A1 or A2 are unlimited, it is for radiation control purposes only. For nuclear criticality safety, some materials are subject to controls placed on fissile material.

II. For individual radionuclides whose identities are known, but which are not listed in Table A-1, the determination of the values of A1 and A2 requires NRC approval, except that the values of A1 and A2 in Table A-2 may be used without obtaining approval from the NRC.

(2003 Ed.)

III. In the calculations of A1 and A2 for a radionuclide not in Table A-1, a single radioactive decay chain, in which radionuclides are present in their naturally occurring proportions, and in which no daughter nuclide has a half-life either longer than ten days, or longer than that of the parent nuclide, shall be considered as a single radionuclide, and the activity to be taken into account, and the A1 or A2 value to be applied shall be those corresponding to the parent nuclide of that chain. In the case of radioactive decay chains in which any daughter nuclide has a half-life either longer than ten days, or greater than that of the parent nuclide, the parent and those daughter nuclides shall be considered as mixtures of different nuclides.

IV. For mixtures of radionuclides whose identities and respective activities are known, the following conditions apply:

(a) For special form radioactive material, the maximum quantity transported in a Type A package:

$$\sum_I \frac{B(i)}{A1(i)} \quad \text{less than or equal to } 1$$

(b) For normal form radioactive material, the maximum quantity transported in a Type A package:

$$\sum_I \frac{B(i)}{A2(i)} \quad \text{less than or equal to } 1$$

Where B(i) is the activity of radionuclide I and A1(i) and A2(i) are the A1 and A2 values for radionuclide I, respectively.

Alternatively, an A1 value for mixtures of special form material may be determined as follows:

$$A1 \text{ for mixture} = \frac{1}{\sum_I \frac{f(i)}{A1(i)}}$$

Where f(i) is the fraction of activity of nuclide I in the mixture and A1(i) is the appropriate A1 value for nuclide I.

An A2 value for mixtures of normal form material may be determined as follows:

$$A2 \text{ for mixture} = \frac{1}{\sum_I \frac{f(i)}{A2(i)}}$$

Where f(i) is the fraction of activity of nuclide I in the mixture and A2(i) is the appropriate A2 value for nuclide I.

V. When the identity of each radionuclide is known, but the individual activities of some of the radionuclides are not known, the radionuclides may be grouped and the lowest A1 or A2 value, as appropriate, for the radionuclides in each group may be used in applying the formulas in paragraph IV. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest A1 or A2 values for the alpha emitters and beta/gamma emitters.

[Title 246 WAC—p. 327]

Table A-1.—A1 and A2 Values for Radionuclides

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Ac-225	Actinium (89)	0.6	16.2	1E-2	0.270	2.1E+3	5.8E+4
Ac-227		40	1080	2E-5	5.41E-4	2.7	7.2E+1
Ac-228		0.6	16.2	0.4	10.8	8.4E+4	2.2E+6
Ag-105	Silver (47)	2	54.1	2	54.1	1.1E+3	3.0E+4
Ag-108m		0.6	16.2	0.6	16.2	9.7E-1	2.6E+1
Ag-110m		0.4	10.8	0.4	10.8	1.8E+2	4.7E+3
Ag-111		0.6	16.2	0.5	13.5	5.8E+3	1.6E+5
Al-26	Aluminum (13)	0.4	10.8	0.4	10.8	7.0E-4	1.9E-2
Am-241	Americium (95)	2	54.1	2E-4	5.41E-3	1.3E-1	3.4
Am-242m		2	54.1	2E-4	5.41E-3	3.6E-1	1.0E+1
Am-243		2	54.1	2E-4	5.41E-3	7.4E-3	2.0E-1
Ar-37	Argon (18)	40	1080	40	1080	3.7E+3	9.9E+4
Ar-39		20	541	20	541	1.3	3.4E+1
Ar-41		0.6	16.2	0.6	16.2	1.5E+6	4.2E+7
Ar-42		0.2	5.41	0.2	5.41	9.6	2.6E+2
As-72	Arsenic (33)	0.2	5.41	0.2	5.41	6.2E+4	1.7E+6
As-73		40	1080	40	1080	8.2E+2	2.2E+4
As-74		1	27.0	0.5	13.5	3.7E+3	9.9E+4
As-76		0.2	5.41	0.2	5.41	5.8E+4	1.6E+6
As-77		20	541	0.5	13.5	3.9E+4	1.0E+6
At-211	Astatine (85)	30	811	2	54.1	7.6E+4	2.1E+6
Au-193	Gold (79)	6	162	6	162	3.4E+4	9.2E+5
Au-194		1	27.0	1	27.0	1.5E+4	4.1E+5
Au-195		10	270	10	270	1.4E+2	3.7E+3
Au-196		2	54.1	2	54.1	4.0E+3	1.1E+5
Au-198		3	81.1	0.5	13.5	9.0E+3	2.4E+5
Au-199		10	270	0.9	24.3	7.7E+3	2.1E+5
Ba-131	Barium (56)	2	54.1	2	54.1	3.1E+3	8.4E+4
Ba-133m		10	270	0.9	24.3	2.2E+4	6.1E+5
Ba-133		3	81.1	3	81.1	9.4	2.6E+2
Ba-140		0.4	10.8	0.4	10.8	2.7E+3	7.3E+4
Be-7	Beryllium (4)	20	541	20	541	1.3E+4	3.5E+5
Be-10		20	541	0.5	13.5	8.3E-4	2.2E-2
Bi-205	Bismuth (83)	0.6	16.2	0.6	16.2	1.5E-3	4.2E+4
Bi-206		0.3	8.11	0.3	8.11	3.8E+3	1.0E+5
Bi-207		0.7	18.9	0.7	18.9	1.9	5.2E+1
Bi-210m		0.3	8.11	3E-2	0.811	2.1E-5	5.7E-4
Bi-210		0.6	16.2	0.5	13.5	4.6E+3	1.2E+5
Bi-212		0.3	8.11	0.3	8.11	5.4E+5	1.5E+7
Bk-247	Berkelium (97)	2	54.1	2E-4	5.41E-3	3.8E-2	1.0
Bk-249		40	1080	8E-2	2.16	6.1E+1	1.6E+3
Br-76	Bromine (35)	0.3	8.11	0.3	8.11	9.4E+4	2.5E+6
Br-77		3	81.1	3	81.1	2.6E+4	7.1E+5
Br-82		0.4	10.8	0.4	10.8	4.0E+4	1.1E+6
C-11	Carbon (6)	1	27	0.5	13.5	3.1E+7	8.4E+8
C-14		40	1080	2	54.1	1.6E-1	4.5
Ca-41	Calcium (20)	40	1080	40	1080	3.1E-3	8.5E-2
Ca-45		40	1080	0.9	24.3	6.6E+2	1.8E+4
Ca-47		0.9	24.3	0.5	13.5	2.3E+4	6.1E+5
Cd-109	Cadmium (48)	40	1080	1	27.0	9.6E+1	2.6E+3
Cd-113m		20	541	9E-2	2.43	8.3	2.2E+2
Cd-115m		0.3	8.11	0.3	8.11	9.4E+2	2.5E+4
Cd-115		4	108	0.5	13.5	1.9E+4	5.1E+5
Ce-139	Cerium (58)	6	162	6	162	2.5E+2	6.8E+3
Ce-141		10	270	0.5	13.5	1.1E+3	2.8E+4
Ce-143		0.6	16.2	0.5	13.5	2.5E+4	6.6E+5
Ce-144		0.2	5.41	0.2	5.41	1.2E+2	3.2E+3
Cf-248	Californium (98)	30	811	3E-3	8.11E-2	5.8E+1	1.6E+3
Cf-249		2	54.1	2E-4	5.41E-3	1.5E-1	4.1
Cf-250		5	135	5E-4	1.35E-2	4.0	1.1E+2
Cf-251		2	54.1	2E-4	5.41E-3	5.9E-2	1.6
Cf-252		0.1	2.70	1E-3	2.70E-2	2.0E+1	5.4E+2
Cf-253		40	1080	6E-2	1.62	1.1E+3	2.9E+4
Cf-254		3E-3	8.11E-2	6E-4	1.62E-2	3.1E+2	8.5E+3
Cl-36	Chlorine (17)	20	541	0.5	13.5	1.2E-3	3.3E-2
Cl-38		0.2	5.41	0.2	5.41	4.9E+6	1.3E+8
Cm-240	Curium (96)	40	1080	2E-2	0.541	7.5E+2	2.0E+4
Cm-241		2	54.1	0.9	24.3	6.1E+2	1.7E+4
Cm-242		40	1080	1E-2	0.270	1.2E+2	3.3E+3
Cm-243		3	81.1	3E-4	8.11E-3	1.9	5.2E+1

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Cm-244		4	108	4E-4	1.08E-2	3.0	8.1E+1
Cm-245		2	54.1	2E-4	5.41E-3	6.4E-3	1.7E-1
Cm-246		2	54.1	2E-4	5.41E-3	1.1E-2	3.1E-1
Cm-247		2	54.1	2E-4	5.41E-3	3.4E-6	9.3E-5
Cm-248		4E-2	1.08	5E-5	1.35E-3	1.6E-4	4.2E-3
Co-55	Cobalt (27)	0.5	13.5	0.5	13.5	1.1E+5	3.1E+6
Co-56		0.3	8.11	0.3	8.11	1.1E+3	3.0E+4
Co-57		8	216	8	216	3.1E+2	8.4E+3
Co-58m		40	1080	40	1080	2.2E+5	5.9E+6
Co-58		1	27.0	1	27.0	1.2E+3	3.2E+4
Co-60		0.4	10.8	0.4	10.8	4.2E+1	1.1E+3
Cr-51	Chromium (24)	30	811	30	811	3.4E+3	9.2E+4
Cs-129	Cesium (55)	4	108	4	108	2.8E+4	7.6E+5
Cs-131		40	1080	40	1080	3.8E+3	1.0E+5
Cs-132		1	27.0	1	27.0	5.7E+3	1.5E+5
Cs-134m		40	1080	9	243	3.0E+5	8.0E+6
Cs-134		0.6	16.2	0.5	13.5	4.8E+1	1.3E+3
Cs-135		40	1080	0.9	24.3	4.3E-5	1.2E-3
Cs-136		0.5	13.5	0.5	13.5	2.7E+3	7.3E+4
Cs-137		2	54.1	0.5	13.5	3.2	8.7E+1
Cu-64	Copper (29)	5	135	0.9	24.3	1.4E+5	3.9E+6
Cu-67		9	243	0.9	24.3	2.8E+4	7.6E+5
Dy-159	Dysprosium (66)	20	541	20	541	2.1E+2	5.7E+3
Dy-165		0.6	16.2	0.5	13.5	3.0E+5	8.2E+6
Dy-166		0.3	8.11	0.3	8.11	8.6E+3	2.3E+5
Er-169	Erbium (68)	40	1080	0.9	24.3	3.1E+3	8.3E+4
Er-171		0.6	16.2	0.5	13.5	9.0E+4	2.4E+6
Es-253	Einsteinium (99)a	200	5400	2E-2	5.41E-1		
Es-254		30	811	3E-3	8.11E-2		
Es-254m		0.6	16.2	0.4	10.8		
Es-255							
Eu-147	Europium (63)	2	54.1	2	54.1	1.4E+3	3.7E+4
Eu-148		0.5	13.5	0.5	13.5	6.0E+2	1.6E+4
Eu-149		20	541	20	541	3.5E+2	9.4E+3
Eu-150		0.7	18.9	0.7	18.9	6.1E+4	1.6E+6
Eu-152m		0.6	16.2	0.5	13.5	8.2E+4	2.2E+6
Eu-152		0.9	24.3	0.9	24.3	6.5	1.8E+2
Eu-154		0.8	21.6	0.5	13.5	9.8	2.6E+2
Eu-155		20	541	2	54.1	1.8E+1	4.9E+2
Eu-156		0.6	16.2	0.5	13.5	2.0E+3	5.5E+4
F-18	Fluorine (9)	1	27.0	0.5	13.5	3.5E+6	9.5E+7
Fe-52	Iron (26)	0.2	5.41	0.2	5.41	2.7E+5	7.3E+6
Fe-55		40	1080	40	1080	8.8E+1	2.4E+3
Fe-59		0.8	21.6	0.8	21.6	1.8E+3	5.0E+4
Fe-60		40	1080	0.2	5.41	7.4E-4	2.0E-2
Fm-255	Fermium (100) b	40	1080	0.8	21.6		
Fm-257		10	270	8E-3	2.16E-1		
Ga-67	Gallium (31)	6	162	6	162	2.2E+4	6.0E+5
Ga-68		0.3	8.11	0.3	8.11	1.5E+6	4.1E+7
Ga-72		0.4	10.8	0.4	10.8	1.1E+5	3.1E+6
Gd-146	Gadolinium (64)	0.4	10.8	0.4	10.8	6.9E+2	1.9E+4
Gd-148		3	81.1	3E-4	8.11E-3	1.2	3.2E+1
Gd-153		10	270	5	135	1.3E+2	3.5E+3
Gd-159		4	108	0.5	13.5	3.9E+4	1.1E+6
Ge-68	Germanium (32)	0.3	8.11	0.3	8.11	2.6E+2	7.1E+3
Ge-71		40	1080	40	1080	5.8E+3	1.6E+5
Ge-77		0.3	8.11	0.3	8.11	1.3E+5	3.6E+6
H-3	Hydrogen (1)	See T- Tritium					
Hf-172	Hafnium (72)	0.5	13.5	0.3	8.11	4.1E+1	1.1E+3
Hf-175		3	81.1	3	81.1	3.9E+2	1.1E+4
Hf-181		2	54.1	0.9	24.3	6.3E+2	1.7E+4
Hf-182		4	108	3E-2	0.811	8.1E-6	2.2E-4
Hg-194	Mercury (80)	1	27.0	1	27.0	1.3E-1	3.5
Hg-195m		5	135	5	135	1.5E+4	4.0E+5
Hg-197m		10	270	0.9	24.3	2.5E+4	6.7E+5
Hg-197		10	270	10	270	9.2E+3	2.5E+5
Hg-203		4	108	0.9	24.3	5.1E+2	1.4E+4
Ho-163	Holmium (67)	40	1080	40	1080	2.7	7.6E+1
Ho-166m		0.6	16.2	0.3	8.11	6.6E-2	1.8
Ho-166		0.3	8.11	0.3	8.11	2.6E+4	7.0E+5
I-123	Iodine (53)	6	162	6	162	7.1E+4	1.9E+6
I-124		0.9	24.3	0.9	24.3	9.3E+3	2.5E+5

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
I-125		20	541	2	54.1	6.4E+2	1.7E+4
I-126		2	54.1	0.9	24.3	2.9E+3	8.0E+4
I-129		Unlimited	Unlimited	Unlimited	Unlimited	6.5E-6	1.8E-4
I-131		3	81.1	0.5	13.5	4.6E+3	1.2E+5
I-132		0.4	10.8	0.4	10.8	3.8E+5	1.0E+7
I-133		0.6	16.2	0.5	13.5	4.2E+4	1.1E+6
I-134		0.3	8.11	0.3	8.11	9.9E+5	2.7E+7
I-135		0.6	16.2	0.5	13.5	1.3E+5	3.5E+6
In-111	Indium (49)	2	54.1	2	54.1	1.5E+4	4.2E+5
In-113m		4	108	4	108	6.2E+5	1.7E+7
In-114m		0.3	8.11	0.3	8.11	8.6E+2	2.3E+4
In-115m		6	162	0.9	24.3	2.2E+5	6.1E+6
Ir-189	Iridium (77)	10	270	10	270	1.9E+3	5.2E+4
Ir-190		0.7	18.9	0.7	18.9	2.3E+3	6.2E+4
Ir-192		1	27.0	0.5	13.5	3.4E+2	9.2E+3
Ir-193m		10	270	10	270	2.4E+3	6.4E+4
Ir-194		0.2	5.41	0.2	5.41	3.1E+4	8.4E+5
K-40	Potassium (19)	0.6	16.2	0.6	16.2	2.4E-7	6.4E-6
K-42		0.2	5.41	0.2	5.41	2.2E+5	6.0E+6
K-43		1.0	27.0	0.5	13.5	1.2E+5	3.3E+6
Kr-81	Krypton (36)	40	1080	40	1080	7.8E-4	2.1E-2
Kr-85m		6	162	6	162	3.0E+5	8.2E+6
Kr-85		20	541	10	270	1.5E+1	3.9E+2
Kr-87		0.2	5.41	0.2	5.41	1.0E+6	2.8E+7
La-137	Lanthanum (57)	40	1080	2	54.1	1.6E-3	4.4E-2
La-140		0.4	10.8	0.4	10.8	2.1E+4	5.6E+5
Lu-172	Lutetium (71)	0.5	13.5	0.5	13.5	4.2E+3	1.1E+5
Lu-173		8	216	8	216	5.6E+1	1.5E+3
Lu-174m		20	541	8	216	2.0E+2	5.3E+3
Lu-174		8	216	4	108	2.3E+1	6.2E+2
Lu-177		30	811	0.9	24.3	4.1E+3	1.1E+5
MFP		(6) For mixed fission products, use formula for mixtures or Table A-2					
Mg-28	Magnesium (12)	0.2	5.41	0.2	5.41	2.0E+5	5.4E+6
Mn-52	Manganese (25)	0.3	8.11	0.3	8.11	1.6E+4	4.4E+5
Mn-53		Unlimited	Unlimited	Unlimited	Unlimited	6.8E-5	1.8E-3
Mn-54		1	27.0	1	27.0	2.9E+2	7.7E+3
Mn-56		0.2	5.41	0.2	5.41	8.0E+5	2.2E+7
Mo-93	Molybdenum (42)	40	1080	7	189	4.1E-2	1.1
Mo-99		0.6	16.2	0.5	13.5c	1.8E+4	4.8E+5
N-13	Nitrogen (7)	0.6	16.2	0.5	13.5	5.4E+7	1.5E+9
Na-22	Sodium (11)	0.5	13.5	0.5	13.5	2.3E+2	6.3E+3
Na-24		0.2	5.41	0.2	5.41	3.2E+5	8.7E+6
Nb-92m	Niobium (41)	0.7	18.9	0.7	18.9	5.2E+3	1.4E+5
Nb-93m		40	1080	6	162	8.8	2.4E+2
Nb-94		0.6	16.2	0.6	16.2	6.9E-3	1.9E-1
Nb-95		1	27.0	1	27.0	1.5E+3	3.9E+4
Nb-97		0.6	16.2	0.5	13.5	9.9E+5	2.7E+7
Nd-147	Neodymium (60)	4	108	0.5	13.5	3.0E+3	8.1E+4
Nd-149		0.6	16.2	0.5	13.5	4.5E+5	1.2E+7
Ni-59	Nickel (28)	40	1080	40	1080	3.0E-3	8.0E-2
Ni-63		40	1080	30	811	2.1	5.7E+1
Ni-65		0.3	8.11	0.3	8.11	7.1E+5	1.9E+7
Np-235	Neptunium (93)	40	1080	40	1080	5.2E+1	1.4E+3
Np-236		7	189	1E-3	2.70E-2	4.7E-4	1.3E-2
Np-237		2	54.1	2.0E-4	5.41E-3	2.6E-5	7.1E-4
Np-239		6	162	0.5	13.5	8.6E+3	2.3E+5
Os-185	Osmium (76)	1	27.0	1	27.0	2.8E+2	7.5E+3
Os-191m		40	1080	40	1080	4.6E+4	1.3E+6
Os-191		10	270	0.9	24.3	1.6E+3	4.4E+4
Os-193		0.6	16.2	0.5	13.5	2.0E+4	5.3E+5
Os-194		0.2	5.41	0.2	5.41	1.1E+1	3.1E+2
P-32	Phosphorus (15)	0.3	8.11	0.3	8.11	1.1E+4	2.9E+5
P-33		40	1080	0.9	24.3	5.8E+3	1.6E+5
Pa-230	Protactinium (91)	2	54.1	0.1	2.70	1.2E+3	3.3E+4
Pa-231		0.6	16.2	6E-5	1.62E-3	1.7E-3	4.7E-2
Pa-233		5	135	0.9	24.3	7.7E+2	2.1E+4
Pb-201	Lead (82)	1	27.0	1	27.0	6.2E+4	1.7E+6
Pb-202		40	1080	2	54.1	1.2E-4	3.4E-3
Pb-203		3	81.1	3	81.1	1.1E+4	3.0E+5
Pb-205		Unlimited	Unlimited	Unlimited	Unlimited	4.5E-6	1.2E-4
Pb-210		0.6	16.2	9E-3	0.243	2.8	7.6E+1
Pb-212		0.3	8.11	0.3	8.11	5.1E+4	1.4E+6

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Pd-103	Palladium (46)	40	1080	40	1080	2.8E+3	7.5E+4
Pd-107		Unlimited	Unlimited	Unlimited	Unlimited	1.9E-5	5.1E-4
Pd-109		0.6	16.2	0.5	13.5	7.9E+4	2.1E+6
Pm-143	Promethium (61)	3	81.1	3	81.1	1.3E+2	3.4E+3
Pm-144		0.6	16.2	0.6	16.2	9.2E+1	2.5E+3
Pm-145		30	811	7	189	5.2	1.4E+2
Pm-147		40	1080	0.9	24.3	3.4E+1	9.3E+2
Pm-148m		0.5	13.5	0.5	13.5	7.9E+2	2.1E+4
Pm-149		0.6	16.2	0.5	13.5	1.5E+4	4.0E+5
Pm-151		3	81.1	0.5	13.5	2.7E+4	7.3E+5
Po-208	Polonium (84)	40	1080	2E-2	0.541	2.2E+1	5.9E+2
Po-209		40	1080	2E-2	0.541	6.2E-1	1.7E+1
Po-210		40	1080	2E-2	0.541	1.7E+2	4.5E+3
Pr-142	Praseodymium (59)	0.2	5.41	0.2	5.41	4.3E+4	1.2E+6
Pr-143		4	108	0.5	13.5	2.5E+3	6.7E+4
Pt-188	Platinum (78)	0.6	16.2	0.6	16.2	2.5E+3	6.8E+4
Pt-191		3	81.1	3	81.1	8.7E+3	2.4E+5
Pt-193m		40	1080	9	243	5.8E+3	1.6E+5
Pt-193		40	1080	40	1080	1.4	3.7E+1
Pt-195m		10	270	2	54.1	6.2E+3	1.7E+5
Pt-197m		10	270	0.9	24.3	3.7E+5	1.0E+7
Pt-197		20	541	0.5	13.5	3.2E+4	8.7E+5
Pu-236	Plutonium (94)	7	189	7E-4	1.89E-2	2.0E+1	5.3E+2
Pu-237		20	541	20	541	4.5E+2	1.2E+4
Pu-238		2	54.1	2E-4	5.41E-3	6.3E-1	1.7E+1
Pu-239		2	54.1	2E-4	5.41E-3	2.3E-3	6.2E-2
Pu-240		2	54.1	2E-4	5.41E-3	8.4E-3	2.3E-1
Pu-241		40	1080	1E-2	0.270	3.8	1.0E+2
Pu-242		2	54.1	2E-4	5.41E-3	1.5E-4	3.9E-3
Pu-244		0.3	8.11	2E-4	5.41E-3	6.7E-7	1.8E-5
Ra-223	Radium (88)	0.6	16.2	3E-2	0.811	1.9E+3	5.1E+4
Ra-224		0.3	8.11	6E-2	1.62	5.9E+3	1.6E+5
Ra-225		0.6	16.2	2E-2	0.541	1.5E+3	3.9E+4
Ra-226		0.3	8.11	2E-2	0.541	3.7E-2	1.0
Ra-228		0.6	16.2	4E-2	1.08	1.0E+1	2.7E+2
Rb-81	Rubidium (37)	2	54.1	0.9	24.3	3.1E+5	8.4E+6
Rb-83		2	54.1	2	54.1	6.8E+2	1.8E+4
Rb-84		1	27.0	0.9	24.3	1.8E+3	4.7E+4
Rb-86		0.3	8.11	0.3	8.11	3.0E+3	8.1E+4
Rb-87		Unlimited	Unlimited	Unlimited	Unlimited	3.2E-9	8.6E-8
Rb (natural)		Unlimited	Unlimited	Unlimited	Unlimited	6.7E+6	1.8E+8
Re-183	Rhenium (75)	5	135	5	135	3.8E+2	1.0E+4
Re-184m		3	81.1	3	81.1	1.6E+2	4.3E+3
Re-184		1	27.0	1	27.0	6.9E+2	1.9E+4
Re-186		4	108	0.5	13.5	6.9E+3	1.9E+5
Re-187		Unlimited	Unlimited	Unlimited	Unlimited	1.4E-9	3.8E-8
Re-188		0.2	5.41	0.2	5.41	3.6E+4	9.8E+5
Re-189		4	108	0.5	13.5	2.5E+4	6.8E+5
Re (natural)		Unlimited	Unlimited	Unlimited	Unlimited		2.4E-8
Rh-99	Rhodium (45)	2	54.1	2	54.1	3.0E+3	8.2E+4
Rh-101		4	108	4	108	4.1E+1	1.1E+3
Rh-102m		2	54.1	0.9	24.3	2.3E+2	6.2E+3
Rh-102		0.5	13.5	0.5	13.5	4.5E+1	1.2E+3
Rh-103m		40	1080	40	1080	1.2E+6	3.3E+7
Rh-105		10	270	0.9	24.3	3.1E+4	8.4E+5
Rn-222	Radon (86)	0.2	5.41	4E-3	0.108	5.7E+3	1.5E+5
Ru-97	Ruthenium (44)	4	108	4	108	1.7E+4	4.6E+5
Ru-103		2	54.1	0.9	24.3	1.2E+3	3.2E+4
Ru-105		0.6	16.2	0.5	13.5	2.5E+5	6.7E+6
Ru-106		0.2	5.41	0.2	5.41	1.2E+2	3.3E+3
S-35	Sulfur (16)	40	1080	2	54.1	1.6E+3	4.3E+4
Sb-122	Antimony (51)	0.3	8.11	0.3	8.11	1.5E+4	4.0E+5
Sb-124		0.6	16.2	0.5	13.5	6.5E+2	1.7E+4
Sb-125		2	54.1	0.9	24.3	3.9E+1	1.0E+3
Sb-126		0.4	10.8	0.4	10.8	3.1E+3	8.4E+4
Sc-44	Scandium (21)	0.5	13.5	0.5	13.5	6.7E+5	1.8E+7
Sc-46		0.5	13.5	0.5	13.5	1.3E+3	3.4E+4
Sc-47		9	243	0.9	24.3	3.1E+4	8.3E+5
Sc-48		0.3	8.11	0.3	8.11	5.5E+4	1.5E+6
Se-75	Selenium (34)	3	81.1	3	81.1	5.4E+2	1.5E+4
Se-79		40	1080	2	54.1	2.6E-3	7.0E-2
Si-31	Silicon (14)	0.6	16.2	0.5	13.5	1.4E+6	3.9E+7

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Si-32		40	1080	0.2	5.41	3.9	1.1E+2
Sm-145	Samarium (62)	20	541	20	541	9.8E+1	2.6E+3
Sm-147		Unlimited	Unlimited	Unlimited	Unlimited	8.5E-1	2.3E-8
Sm-151		40	1080	4	108	9.7E-1	2.6E+1
Sm-153		4	108	0.5	13.5	1.6E+4	4.4E+5
Sn-113	Tin (50)	4	108	4	108	3.7E+2	1.0E+4
Sn-117m		6	162	2	54.1	3.0E+3	8.2E+4
Sn-119m		40	1080	40	1080	1.4E+2	3.7E+3
Sn-121m		40	1080	0.9	24.3	2.0	5.4E+1
Sn-123		0.6	16.2	0.5	13.5	3.0E+2	8.2E+3
Sn-125		0.2	5.41	0.2	5.41	4.0E+3	1.1E+5
Sn-126		0.3	8.11	0.3	8.11	1.0E-3	2.8E-2
Sr-82	Strontium (38)	0.2	5.41	0.2	5.41	2.3E+3	6.2E+4
Sr-85m		5	135	5	135	1.2E+6	3.3E+7
Sr-85		2	54.1	2	54.1	8.8E+2	2.4E+4
Sr-87m		3	81.1	3	81.1	4.8E+5	1.3E+7
Sr-89		0.6	16.2	0.5	13.5	1.1E+3	2.9E+4
Sr-90		0.2	5.41	0.1	2.70	5.1	1.4E+2
Sr-91		0.3	8.11	0.3	8.11	1.3E+5	3.6E+6
Sr-92		0.8	21.6	0.5	13.5	4.7E+5	1.3E+7
T	Tritium (1)	40	1080	40	1080	3.6E+2	9.7E+3
Ta-178	Tantalum (73)	1	27.0	1	27.0	4.2E+6	1.1E+8
Ta-179		30	811	30	811	4.1E+1	1.1E+3
Ta-182		0.8	21.6	0.5	13.5	2.3E+2	6.2E+3
Tb-157	Terbium (65)	40	1080	10	270	5.6E-1	1.5E+1
Tb-158		1	27.0	0.7	18.9	5.6E-1	1.5E+1
Tb-160		0.9	24.3	0.5	13.5	4.2E+2	1.1E+4
Tc-95m	Technetium (43)	2	54.1	2	54.1	8.3E+2	2.2E+4
Tc-96m		0.4	10.8	0.4	10.8	1.4E+6	3.8E+7
Tc-96		0.4	10.8	0.4	10.8	1.2E+4	3.2E+5
Tc-97m		40	1080	40	1080	5.6E+2	1.5E+4
Tc-97		Unlimited	Unlimited	Unlimited	Unlimited	5.2E-5	1.4E-3
Tc-98		0.7	18.9	0.7	18.9	3.2E-5	8.7E-4
Tc-99m		8	216	8	216	1.9E+5	5.3E+6
Tc-99		40	1080	0.9	24.3	6.3E-4	1.7E-2
Te-118	Tellurium (52)	0.2	5.41	0.2	5.41	6.8E+3	1.8E+5
Te-121m		5	135	5	135	2.6E+2	7.0E+3
Te-121		2	54.1	2	54.1	2.4E+3	6.4E+4
Te-123m		7	189	7	189	3.3E+2	8.9E+3
Te-125m		30	811	9	243	6.7E+2	1.8E+4
Te-127m		20	541	0.5	13.5	3.5E+2	9.4E+3
Te-127		20	541	0.5	13.5	9.8E+4	2.6E+6
Te-129m		0.6	16.2	0.5	13.5	1.1E+3	3.0E+4
Te-129		0.6	16.2	0.5	13.5	7.7E+5	2.1E+7
Te-131m		0.7	18.9	0.5	13.5	3.0E+4	8.0E+5
Te-132		0.4	10.8	0.4	10.8	1.1E+4	3.0E+5
Th-227	Thorium (90)	9	243	1E-2	0.270	1.1E+3	3.1E+4
Th-228		0.3	8.11	4E-4	1.08E-2	3.0E+1	8.2E+2
Th-229		0.3	8.11	3E-5	8.11E-4	7.9E-3	2.1E-1
Th-230		2	54.1	2E-4	5.41E-3	7.6E-4	2.1E-2
Th-231		40	1080	0.9	24.3	2.0E+4	5.3E+5
Th-232		Unlimited	Unlimited	Unlimited	Unlimited	4.0E-9	1.1E-7
Th-234		0.2	5.41	0.2	5.41	8.6E+2	2.3E+4
Th (natural)		Unlimited	Unlimited	Unlimited	Unlimited	8.1E-9	2.2E-7
Ti-44	Titanium (22)	0.5	13.5	0.2	5.41	6.4	1.7E+2
Tl-200	Thallium (81.1)	0.8	21.6	0.8	21.6	2.2E+4	6.0E+5
Tl-201		10	270	10	270	7.9E+3	2.1E+5
Tl-202		2	54.1	2	54.1	2.0E+3	5.3E+4
Tl-204		4	108	0.5	13.5	1.7E+1	4.6E+2
Tm-167	Thulium (69)	7	189	7	189	3.1E+3	8.5E+4
Tm-168		0.8	21.6	0.8	21.6	3.1E+2	8.3E+3
Tm-170		4	108	0.5	13.5	2.2E+2	6.0E+3
Tm-171		40	1080	10	270	4.0E+1	1.1E+3
U-230	Uranium (92)	40	1080	1E-2	0.270	1.0E+3	2.7E+4
U-232		3	81.1	3E-4	8.11E-3	8.3E-1	2.2E+1
U-233		10	270	1E-3	2.70E-2	3.6E-4	9.7E-3
U-234		10	270	1E-3	2.70E-2	2.3E-4	6.2E-3
U-235		Unlimited	Unlimited	Unlimited	Unlimited	8.0E-8	2.2E-6
U-236		10	270	1E-3	2.70E-2	2.4E-6	6.5E-5
U-238		Unlimited	Unlimited	Unlimited	Unlimited	1.2E-8	3.4E-7
U (natural)		Unlimited	Unlimited	Unlimited	Unlimited	2.6E-8	7.1E-7
U (enriched 5% or less)		Unlimited	Unlimited	Unlimited	Unlimited	(See Table A-3)	

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
U (enriched more than 5%)		10	270	1E-3	2.70E-2	(See Table A-3)	
U (depleted)		Unlimited	Unlimited	Unlimited	Unlimited	(See Table A-3)	
V-48	Vanadium (23)	0.3	8.11	0.3	8.11	6.3E+3	1.7E+5
V-49		40	1080	40	1080	3.0E+2	8.1E+3
W-178	Tungsten (74)	1	27.0	1	27.0	1.3E+3	3.4E+4
W-181		30	811	30	811	2.2E+2	6.0E+3
W-185		40	1080	0.9	24.3	3.5E+2	9.4E+3
W-187		2	54.1	0.5	13.5	2.6E+4	7.0E+5
W-188		0.2	5.41	0.2	5.41	3.7E+2	1.0E+4
Xe-122	Xenon (54)	0.2	5.41	0.2	5.41	4.8E+4	1.3E+6
Xe-123		0.2	5.41	0.2	5.41	4.4E+5	1.2E+7
Xe-127		4	108	4	108	1.0E+3	2.8E+4
Xe-131m		40	1080	40	1080	3.1E+3	8.4E+4
Xe-133		20	541	20	541	6.9E+3	1.9E+5
Xe-135		4	108	4	108	9.5E+4	2.6E+6
Y-87	Yttrium (39)	2	54.1	2	54.1	1.7E+4	4.5E+5
Y-88		0.4	10.8	0.4	10.8	5.2E+2	1.4E+4
Y-90		0.2	5.41	0.2	5.41	2.0E+4	5.4E+5
Y-91m		2	54.1	2	54.1	1.5E+6	4.2E+7
Y-91		0.3	8.11	0.3	8.11	9.1E+2	2.5E+4
Y-92		0.2	5.41	0.2	5.41	3.6E+5	9.6E+6
Y-93		0.2	5.41	0.2	5.41	1.2E+5	3.3E+6
Yb-169	Ytterbium (70)	3	81.1	3	81.1	8.9E+2	2.4E+4
Yb-175		30	811	0.9	24.3	6.6E+3	1.8E+5
Zn-65	Zinc (30)	2	54.1	2	54.1	3.0E+2	8.2E+3
Zn-69m		2	54.1	0.5	13.5	1.2E+5	3.3E+6
Zn-69		4	108	0.5	13.5	1.8E+6	4.9E+7
Zr-88	Zirconium (40)	3	81.1	3	81.1	6.6E+2	1.8E+4
Zr-93		40	1080	0.2	5.41	9.3E-5	2.5E-3
Zr-95		1	27.0	0.9	24.3	7.9E+2	2.1E+4
Zr-97		0.3	8.11	0.3	8.11	7.1E+4	1.9E+6

- a International shipments of Einsteinium require multilateral approval of A1 and A2 values.
- b International shipments of Fermium require multilateral approval of A1 and A2 values.
- c 20 Ci for Mo99 for domestic use.

Table A-2.—General Values for A1 and A2

Contents	A1		A2	
	(TBq)	(Ci)	(TBq)	(Ci)
Only beta- or gamma-emitting nuclides are known to be present . . .	0.2	5	0.02	0.5
Alpha-emitting nuclides are known to be present, or no relevant data are available	0.10	2.70	2E-5	5.41E-4

Table A-3.—Activity-mass Relationships for Uranium

Uranium Enrichment 1 wt % U-235 present	Specific Activity	
	TBq/g	Ci/g
0.45	1.8E-8	5.0E-7
0.72	2.6E-8	7.1E-7
1.0	2.8E-8	7.6E-7
1.5	3.7E-8	1.0E-6
5.0	1.0E-7	2.7E-6
10.0	1.8E-7	4.8E-6
20.0	3.7E-7	1.0E-5
35.0	7.4E-7	2.0E-5
50.0	9.3E-7	2.5E-5
90.0	2.2E-6	5.8E-5
93.0	2.6E-6	7.0E-5
95.0	3.4E-6	9.1E-5

¹ The figures for uranium include representative values for the activity of the uranium-234 that is concentrated during the enrichment process.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-200, filed 7/21/99, effective 8/21/99.]

(2003 Ed.)

**Chapter 246-232 WAC
RADIOACTIVE MATERIAL—LICENSING
APPLICABILITY**

WAC	
246-232-001	Purpose and scope.
246-232-006	Exemption of certain source material.
246-232-007	Exemption of certain depleted uranium items.
246-232-008	Exemption of certain timepieces, hands or dials.
246-232-009	Exemption of certain items containing radioactive material.
246-232-010	Exempt concentrations and exempt quantities.
246-232-011	Exemption of certain self-luminous products containing radioactive material(s).
246-232-012	Exemption of certain gas and aerosol detectors containing radioactive material.
246-232-013	Exemption of certain resins containing scandium-46 and designed for sand consolidation in oil wells.
246-232-014	Exemption of C-14 urea diagnostic capsules for human use.
246-232-020	Types of licenses.
246-232-030	Prelicensing inspection.
246-232-040	Reciprocal recognition of licenses.
246-232-050	Terms and conditions of licenses.
246-232-060	Termination of licenses and decommissioning of sites and separate buildings or outdoor areas.
246-232-070	Modification and revocation of licenses.
246-232-080	Transfer of material.
246-232-090	Transportation.
246-232-120	Schedule B, exempt quantities of radioactive materials.
246-232-130	Schedule C, exempt concentrations.
246-232-140	Schedule D.
246-232-990	Fees.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

246-232-100	Requirements for users of the Washington commercial low-level waste disposal site. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as §
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246-232-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080 and chapter 70.121 RCW. 86-17-027 (Order 2406), § 402-19-530, filed 8/13/86. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-530, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-19-530, filed 12/8/80. Statutory Authority: RCW 70.98.080. 80-02-080 (Order 1481), § 402-19-530, filed 1/21/80.] Repealed by 91-15-112 (Order 184), filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 70.98.050 and 70.98.080.

246-232-110

Large volumes of naturally occurring material. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080 and chapter 70.121 RCW. 86-17-027 (Order 2406), § 402-19-540, filed 8/13/86.] Repealed by 91-15-112 (Order 184), filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 70.98.050 and 70.98.080.

WAC 246-232-001 Purpose and scope. (1) This chapter prescribes rules governing licensing of radioactive material. No person shall receive, possess, use, transfer, own or acquire radioactive material except as authorized in a specific or general license issued pursuant to chapters 246-233 or 246-235 WAC or as otherwise provided in this chapter.

(2) In addition to the requirements of this chapter, or chapters 246-233 or 246-235 WAC, all licensees are subject to the requirements of chapters 246-220, 246-221, 246-222, 246-231, 246-247, and 246-254 WAC. Licensees engaged in the practice of nuclear medicine are subject to the requirements of chapter 246-239 WAC, licensees engaged in industrial radiographic operations are subject to the requirements of chapter 246-243 WAC, licensees using sealed sources in the healing arts are subject to the requirements of chapter 246-240 WAC, licensees using radioactive material in well logging and subsurface tracer studies are subject to the requirements of chapter 246-244 WAC, licensees engaged in land disposal of radioactive waste are subject to the requirements of chapter 246-250 WAC, and licensees owning or operating uranium or thorium mills and associated mill tailings are subject to the requirements of chapter 246-252 WAC.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-232-001, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-010, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-010, filed 11/30/79, effective 1/1/80. Formerly chapter 402-20 WAC.]

WAC 246-232-006 Exemption of certain source material. (1) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses, owns, or transfers source material in any chemical mixture, compound, solution or alloy in which the source material is by weight less than 1/20 of one percent (0.05 percent) of the mixture, compound, solution, or alloy.

(2) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses or transfers unrefined and unprocessed ore containing source material, provided such person shall not refine or process such ore unless authorized to do so in a specific license.

[Title 246 WAC—p. 334]

(3) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses or transfers:

(a) Any quantities of thorium contained in:

(i) Incandescent gas mantles;

(ii) Vacuum tubes;

(iii) Welding rods;

(iv) Electric lamps for illuminating purposes if each lamp contains fifty milligrams or less of thorium;

(v) Germicidal lamps, sunlamps and lamps for outdoor or industrial lighting if each lamp contains two grams or less of thorium;

(vi) Rare earth metals and compounds, mixtures, and products containing 0.25 percent or less by weight thorium, uranium, or any combination of these; or

(vii) Personnel neutron dosimeters if each dosimeter contains 50 milligrams or less of thorium;

(b) Source material contained in the following products:

(i) Glazed ceramic tableware if the glaze contains twenty percent or less by weight source material; and

(ii) Piezoelectric ceramic containing two percent or less by weight source material;

(c) Photographic film, negatives and prints containing uranium or thorium;

(d) Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys if the thorium content of the alloy is four percent or less by weight. The exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical or metallurgical treatment or processing of any such product or part;

(e) Thorium contained in finished optical lenses if each lens contains thirty percent or less by weight of thorium. The exemption contained in this subparagraph shall not be deemed to authorize either:

(i) The shaping, grinding or polishing of lens or manufacturing processes other than the assembly of such lens into optical systems and devices without alteration of the lens; or

(ii) The receipt, possession, use or transfer of thorium contained in contact lenses, or in spectacles, or in eyepieces in binoculars or other optical instruments;

(f) Uranium contained in detector heads for use in fire detection units if each detector head contains 0.005 microcuries or less of uranium; or

(g) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy if:

(i) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and

(ii) The thorium content in the nickel-thoria alloy is four percent or less by weight.

(4) The exemptions in subsection (3) of this section do not authorize the manufacture of any of the products described.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-006, filed 12/29/00, effective 1/29/01.]

WAC 246-232-007 Exemption of certain depleted uranium items. (1) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses or transfers:

(2003 Ed.)

(a) Depleted uranium contained in counterweights installed in aircraft, rockets, projectiles and missiles, or stored or handled in connection with installation or removal of such counterweights if:

(i) The counterweights are manufactured in accordance with a specific license issued by the United States Nuclear Regulatory Commission authorizing distribution by the licensee pursuant to 10 C.F.R. Part 40;

(ii) Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM"*;

(iii) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED"*; and

(iv) The exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical or metallurgical treatment or processing of any such counterweight other than repair or restoration of any plating or other covering;

*Note: The requirements specified in (c) (v) (B) and (C) of this subsection need not be met by counterweights manufactured prior to December 31, 1969: Provided, That such counterweights are impressed with the legend, "CAUTION - RADIOACTIVE MATERIAL - URANIUM," as previously required by the regulations.

(b) Natural or depleted uranium used as shielding constituting part of any shipping container which is conspicuously and legibly impressed with the legend "CAUTION - RADIOACTIVE SHIELDING - URANIUM" and the uranium metal is encased in mild steel or in an equally fire resistant metal of a minimum wall thickness of 3.2 millimeters.

(2) The exemptions in this subsection do not authorize the manufacture of any of the products described.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-007, filed 12/29/00, effective 1/29/01.]

WAC 246-232-008 Exemption of certain timepieces, hands or dials. A person is exempt from these regulations to the extent the person receives, possesses, uses, transfers, owns or acquires, and does not apply radioactive material to, or incorporate radioactive material into, the following timepieces or hands or dials containing the following specified quantities of radioactive material and the following specified levels of radiation*:

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

- (1)(a) 25 millicuries or less of tritium per timepiece;
- (b) 5 millicuries or less of tritium per hand;
- (c) 15 millicuries or less of tritium per dial (bezels when used shall be considered as part of the dial);
- (d) 100 microcuries or less of promethium-147 per watch or 200 microcuries or less of promethium-147 per any other timepiece;

(2003 Ed.)

(e) 20 microcuries or less of promethium-147 per watch hand or 40 microcuries or less of promethium-147 per other timepiece hand;

(f) 60 microcuries or less of promethium-147 per watch dial or 120 microcuries or less of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial);

(2) The levels of radiation from hands and dials containing promethium-147 will not exceed, when measured through 50 milligrams per square centimeter of absorber:

(a) For wrist watches, 0.1 millirad per hour at 10 centimeters from any surface;

(b) For pocket watches, 0.1 millirad per hour at 1 centimeter from any surface;

(c) For any other timepiece, 0.2 millirad per hour at 10 centimeters from any surface.

(3) One microcurie of radium-226 per timepiece in timepieces manufactured prior to the effective date of these regulations.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-008, filed 12/29/00, effective 1/29/01.]

WAC 246-232-009 Exemption of certain items containing radioactive material. A person is exempt from these regulations to the extent the person receives, possesses, uses, transfers, owns or acquires, and does not apply radioactive material to, or incorporate radioactive material into, the following products*:

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(1) Lock illuminators containing 15 millicuries or less of tritium or 2 millicuries or less of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 will not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 50 milligrams per square centimeter of absorber.

(2) Precision balances containing 1 millicurie or less of tritium per balance or 0.5 millicurie or less of tritium per balance part.

(3) Automobile shift quadrants containing 25 millicuries or less of tritium.

(4) Marine compasses containing 750 millicuries or less of tritium gas and other marine navigational instruments containing 250 millicuries or less of tritium gas.

(5) Thermostat dials and pointers containing 25 millicuries or less of tritium per thermostat.

(6) Electron tubes* if each tube contains no more than one of the following specified quantities of radioactive material and the levels of radiation from each electron tube do not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber:

[Title 246 WAC—p. 335]

(a) 150 millicuries or less of tritium per microwave receiver protector tube or 10 millicuries or less of tritium per any other electron tube;

- (b) 1 microcurie or less of cobalt-60;
- (c) 5 microcuries or less of nickel-63;
- (d) 30 microcuries or less of krypton-85;
- (e) 5 microcuries or less of cesium-137;
- (f) 30 microcuries or less of promethium-147;
- (g) 1 microcurie or less of radium-226;

*Note: For purposes of this subdivision, "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

(7) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one or more but not to exceed 10 exempt sources of radioactive material.

(a) Each individual source shall not exceed 0.05 microcuries of americium-241 or the applicable exempt quantity set forth in WAC 246-232-120, Schedule B.

(b) An individual source may contain more than one radionuclide but the total quantity in the individual source shall not exceed unity based on the sum of the fractional parts of one or more of the exempt quantities set forth in WAC 246-232-120, Schedule B. For purposes of this subsection, 0.05 microcuries of americium-241 is considered an exempt quantity.

(8) Spark gap irradiators containing 1 microcurie or less of cobalt-60 per spark gap irradiator for use in electrically ignited fuel oil burners having a firing rate of at least three gallons (11.4 liters) per hour.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-009, filed 12/29/00, effective 1/29/01.]

WAC 246-232-010 Exempt concentrations and exempt quantities. (1) Exempt concentrations.

(a) Except as provided in (b) of this subsection, a person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses, transfers, owns or acquires products or materials containing radioactive material in concentrations less than or equal to those listed in WAC 246-232-130, Schedule C.

(b) No person may introduce radioactive material into a product or material, knowing or having reason to believe, that it will be transferred to persons exempt under (a) of this subsection or equivalent regulations of the United States Nuclear Regulatory Commission, any agreement state or licensing state, except in accordance with a specific license issued under WAC 246-235-105 or the general license provided in WAC 246-232-040.

(2) Exempt quantities.

(a) Except as provided in (b) and (c) of this subsection, a person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns or acquires radioactive material in individual quantities each of which is less than or equal to the applicable quantity set forth in WAC 246-232-120, Schedule B.

(b) This subsection does not authorize the production, packaging or repackaging of radioactive material for pur-

poses of commercial distribution, or the incorporation of radioactive material into products intended for commercial distribution.

(c) No person may, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in WAC 246-232-120, Schedule B, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under subsection (2) of this section or equivalent regulations of the United States Nuclear Regulatory Commission or any agreement state or licensing state, except in accordance with a specific license issued by the United States Nuclear Regulatory Commission, under Section 32.18 of 10 CFR Part 32 or by the department under WAC 246-235-105 which license states that the radioactive material may be transferred by the licensee to persons exempt under subsection (2) of this section or the equivalent regulations of the United States Nuclear Regulatory Commission or any agreement state or licensing state.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-010, filed 12/29/00, effective 1/29/01; 98-13-037, § 246-232-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-190, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-190, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-19-190, filed 12/8/80. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-19-190, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-190.]

WAC 246-232-011 Exemption of certain self-luminous products containing radioactive material(s). (1) Tritium, krypton-85 or promethium-147. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires, and does not manufacture, process, produce, or initially transfer for sale or distribution, self-luminous products containing tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported or initially transferred in accordance with a specific license issued by the United States Nuclear Regulatory Commission under Section 32.22 of 10 C.F.R. Part 32, which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemption in this subsection does not apply to tritium, krypton-85 or promethium-147 used in products primarily for frivolous purposes or in toys or adornments.

(2) Radium-226. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers or owns articles containing less than 0.1 microcurie of radium-226 which were manufactured prior to October 1983.

(2) Radium-226. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers or owns articles containing less than 0.1 microcurie of radium-226 which were manufactured prior to October 1983.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-011, filed 12/29/00, effective 1/29/01.]

WAC 246-232-012 Exemption of certain gas and aerosol detectors containing radioactive material. (1) A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires, and does not manufacture, process or produce, radioactive

(1) A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires, and does not manufacture, process or produce, radioactive

material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards if the detectors have been manufactured, imported, or transferred in accordance with a specific license issued by the United States Nuclear Regulatory Commission* or an agreement state, under Section 32.26 of 10 C.F.R. Part 32, or licensing state under WAC 246-235-105, which authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(2) Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an agreement state shall be considered exempt under subsection (1) of this section if the device is labeled in accordance with the specific license authorizing distribution of the generally licensed device and if the device meets the requirements of WAC 246-235-105.

(3) Gas and aerosol detectors containing naturally occurring and accelerator-produced radioactive material (NARM) previously manufactured and distributed in accordance with a specific license issued by a licensing state shall be considered exempt under subsection (1) of this section if the device is labeled in accordance with the specific license authorizing distribution of the generally licensed device, and if the device meets the requirements of WAC 246-235-105.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-012, filed 12/29/00, effective 1/29/01.]

WAC 246-232-013 Exemption of certain resins containing scandium-46 and designed for sand consolidation in oil wells. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires synthetic plastic resins containing scandium-46 that are designed for sand consolidation in oil wells. The resins shall have been manufactured or imported in accordance with a specific license issued by the United States Nuclear Regulatory Commission or shall have been manufactured in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer of resins under licensing requirements equivalent to those in Sections 32.16 and 32.17 of 10 C.F.R. Part 32 of the regulations of the United States Nuclear Regulatory Commission. This exemption does not authorize the manufacture or initial transfer for sale or distribution of any resins containing scandium-46.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-013, filed 12/29/00, effective 1/29/01.]

WAC 246-232-014 Exemption of C-14 urea diagnostic capsules for human use. (1) Except as provided in subsections (2) and (3) of this section, a person is exempt from the requirements for a license set forth in chapters 246-233 and 246-235 WAC if the person receives, possesses, uses, transfers, owns, or acquires capsules containing 37 kilobecquerels (1 microcurie) carbon-14 urea (allowing for nominal

(2003 Ed.)

variation that may occur during the manufacturing process) each, for "in vivo" diagnostic use for humans.

(2) A person who desires to use the capsules for research involving human subjects shall apply for and receive a specific license under WAC 246-235-080.

(3) A person who desires to manufacture, prepare, process, produce, package, repackage, or transfer for commercial distribution these capsules shall apply for and receive a specific license from the United States Nuclear Regulatory Commission under Section 32.21 of 10 C.F.R. Part 32.

(4) Nothing in this section relieves persons from complying with applicable United States Food and Drug Administration, other federal, and state requirements governing receipt, administration, and use of drugs.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-014, filed 12/29/00, effective 1/29/01.]

WAC 246-232-020 Types of licenses. Licenses for radioactive materials are of two types: General and specific.

(1) General licenses provided in chapter 246-233 WAC are effective without the filing of applications with the department or the issuance of licensing documents to the particular persons, although the filing of a certificate with the department may be required by the particular general license. The general licensee is subject to all other applicable portions of these regulations and any limitations of the general license.

(2) Specific licenses require the submission of an application to the department and the issuance of a licensing document by the department. The licensee is subject to all applicable portions of these regulations as well as any limitations specified in the licensing document. (See chapter 246-235 WAC.)

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-220, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-020.]

WAC 246-232-030 Prelicensing inspection. The department may verify information contained in applications and secure additional information deemed necessary to make a reasonable determination as to whether to issue a license and whether any special conditions should be attached thereto by visiting the facility or location where radioactive materials would be possessed or used, and by discussing details of the proposed possession or use of the radioactive materials with the applicant or representatives designated by the applicant. Such visits may be made by the department or its duly authorized representatives.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-240, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-200.]

WAC 246-232-040 Reciprocal recognition of licenses. (1) Subject to these regulations, any person who holds a specific license from the United States Nuclear Regulatory Commission or any agreement state or licensing state, and issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity

[Title 246 WAC—p. 337]

and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the activities authorized in such licensing document within this state for a period not in excess of one hundred eighty days in that twelve month period which commences the date approval is granted, and the appropriate fee received, by the department provided that:

(a) The licensing document does not limit the activity authorized by such document to specified installations or locations;

(b) The licensed activity is not conducted in an area under exclusive federal jurisdiction;

(c) The out-of-state licensee notifies the department in writing and pays or has paid the appropriate fee (refer to chapter 246-254 WAC), at least three days prior to each entry to the state to engage in such activity. The written notification must be sent to the Radioactive Materials Section, Department of Health, Mailstop 47827, Olympia, Washington 98504-7827 and the fee should be sent to Washington State Department of Health, Revenue Accounting, P.O. Box 1099, Olympia, Washington 98504. Such notification shall indicate the location, period, and type of proposed possession and use within the state, and shall be accompanied by copies of the pertinent licensing documents. If, for a specific case, the three-day period would impose an undue hardship on the out-of-state licensee, the licensee may, upon telephone application to the department (360 236-3220), obtain permission to proceed sooner. The department may waive the requirement for filing additional written notifications during the remainder of the twelve months following the receipt of the initial notification from a person engaging in activities under the general license provided in this subsection;

(d) The out-of-state licensee complies with all applicable regulations of the department and with all the terms and conditions of the licensing document, except any such terms and conditions which may be inconsistent with applicable regulations of the department;

(e) The out-of-state licensee supplies such other information as the department may request; and

(f) The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in this subsection except by transfer to a person:

(i) Specifically licensed by the department or by the United States Nuclear Regulatory Commission, an agreement state or a licensing state to receive such material; or

(ii) Exempt from the requirements for a license for such material under WAC 246-232-010(1).

(2) Notwithstanding the provisions of subsection (1) of this section, any person who holds a specific license issued by the United States Nuclear Regulatory Commission, an agreement state or a licensing state authorizing the holder to manufacture, transfer, install, or service a device described in WAC 246-233-020(4) within the areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate or service a device in this state in areas not under exclusive federal jurisdiction provided that:

(a) Such person shall file a report with the department within thirty days after the end of each calendar quarter in

which any device is transferred to or installed in this state. Each such report shall identify each general licensee to whom such device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device;

(b) The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to such person by the United States Nuclear Regulatory Commission, an agreement state or a licensing state;

(c) Such person shall assure that any labels required to be affixed to the device under regulations of the authority which licensed manufacture of the device bear a statement that "Removal of this label is prohibited"; and

(d) The holder of the specific license shall furnish to each general licensee to whom such device is transferred or on whose premises such device is installed a copy of the general license contained in WAC 246-233-020(4).

(3) The department may withdraw, limit, or qualify its acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed pursuant to such licensing document, upon determining that such action is necessary in order to prevent undue hazard to public health and safety or property.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-040, filed 12/29/00, effective 1/29/01; 99-15-105, § 246-232-040, filed 7/21/99, effective 8/21/99; 98-13-037, § 246-232-040, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-19-250, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-250, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-19-250, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-250, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-210.]

WAC 246-232-050 Terms and conditions of licenses.

(1) Each license issued pursuant to this part shall be subject to all the provisions of the act, as now or hereafter in effect, and to all rules, regulations, and orders of the department.

(2) No license issued or granted under chapters 246-233 and 246-235 WAC and no right to possess or utilize radioactive material granted by any license issued pursuant to chapters 246-233 and 246-235 WAC shall be transferred, assigned, or in any manner disposed, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the department shall, after securing full information find that the transfer is in accordance with the provisions of the act, and shall give its consent in writing.

(3) Each person licensed by the department pursuant to chapters 246-233 and 246-235 WAC shall confine use and possession of the material licensed to the locations and purposes authorized by the license.

(4) Approval of licensee's procedures by the department does not release the licensee from responsibility if adherence to these procedures results in undue exposure to individuals or loss of control of radioactive material.

(5) Each licensee shall notify the department of health, division of radiation protection, in writing, within five work-

ing days following the filing of a voluntary or involuntary petition for bankruptcy by or against:

- (a) The licensee;
 - (b) A person controlling the licensee or listing the license or licensee as property of the estate; or
 - (c) An affiliate of the licensee.
- (6) This notification must include:
- (a) The bankruptcy court in which the petition for bankruptcy was filed;
 - (b) The date of the filing of the petition;
 - (c) A complete and detailed inventory of all radioactive material possessed under the license including nuclide, form, activity and planned disposition;
 - (d) An estimation of the type and quantities of radioactive material the licensee plans to continue to receive and/or use on a routine basis;
 - (e) A description of security and storage for the radioactive material currently possessed;
 - (f) A plan for radioactive waste disposal, the estimated completion date(s), and the cost;
 - (g) An evaluation of facility and equipment contamination, estimate of clean up costs, and a decontamination plan which includes a thorough description of how the clean up will be funded and how it will be accomplished;
 - (h) An organizational chart specifying sole owners, partnerships, or officers in the corporation who have legal and fiscal responsibilities for the licensee;
 - (i) A description of any other changes affecting the terms and conditions of the radioactive materials license.
- (7) Each licensee shall notify the department within five working days if any items in subsection (6) of this section change during bankruptcy proceedings.
- (8) The department will consider clean up costs as part of the licensee's administrative costs if decontamination is necessary to comply with these regulations;
- (9) For the purposes of this section, "affiliate" means:
- (a) A person as defined in WAC 246-220-010 that directly or indirectly owns, controls, or holds with power to vote, twenty percent or more of the outstanding voting securities of the licensee (unless that person holds such securities (i) in a fiduciary or agency capacity without sole discretionary power to vote such securities, or (ii) solely to secure a debt, if such person has not in fact exercised such power to vote);
 - (b) A corporation, twenty percent or more of whose outstanding voting securities are directly or indirectly owned, controlled, or held with power to vote, by the licensee;
 - (c) A person whose business is operated under a lease or operating agreement by a licensee, or person substantially all of whose property is operated under an operating agreement with the licensee; or
 - (d) A person that operates the business or substantially all of the property of the licensee under a lease or operating agreement.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-232-050, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-300, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-300, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-19-300, filed 12/8/80. Statutory Authority: RCW

(2003 Ed.)

70.98.080. 79-12-073 (Order 1459), § 402-19-300, filed 11/30/79, effective 1/1/80.]

WAC 246-232-060 Termination of licenses and decommissioning of sites and separate buildings or outdoor areas. (1) Each specific licensee shall immediately notify the department in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license and request termination of the license. This notification and request for termination of the license must include the reports and information specified in subsection (3)(c) and (d) of this section. The licensee is subject to the provisions of subsections (3) and (4) of this section, as applicable.

(2) No less than thirty days before the expiration date specified in a specific license, the licensee shall either:

(a) Submit an application for license renewal under WAC 246-235-050; or

(b) Notify the department in writing if the licensee decides not to renew the license.

(3) If a specific licensee does not submit an application for license renewal under WAC 246-235-050, the licensee shall on or before the expiration date specified in the license:

(a) Terminate use of radioactive material;

(b) Properly dispose of radioactive material;

(c) Submit a completed departmental form "Certificate of disposition of radioactive material" or equivalent; and

(d) Submit a radiation survey report to confirm the absence of radioactive materials or establish the levels of radioactive contamination, unless the department determines a radiation survey report is not necessary.

(i) If no radioactive contamination attributable to activities conducted under the license is detected, the licensee shall submit a certification that no detectable radioactive contamination was found. If the information submitted under this paragraph and subsection (3)(c) and (d) of this section is adequate, the department will notify the licensee in writing that the license is terminated.

(ii) If detectable levels of radioactive contamination attributable to activities conducted under the license are found, the license continues in effect beyond the expiration date, if necessary, with respect to possession of residual radioactive material present as contamination until the licensee meets the criteria established in chapter 246-246 WAC and the department notifies the licensee in writing that the license is terminated. During this time, the licensee is subject to the provisions of subsection (4) of this section. In addition to the information submitted under subsection (3)(c) and (d) of this section, the licensee shall submit a plan for decontamination, if necessary.

(4) Each specific licensee who possesses residual radioactive material under subsection (3)(d)(ii) of this section, following the expiration of the facility and/or equipment date specified in the license, shall:

(a) Be limited to actions, involving radioactive material related to decontamination and preparation for release in accordance with chapter 246-246 WAC; and

(b) Continue to control entry to restricted areas until:

(i) Such areas are suitable for release in accordance with chapter 246-246 WAC;

(ii) Contaminated equipment complies with guidance contained in WAC 246-232-140, Schedule D; and

(iii) The department notifies the licensee in writing that the license is terminated.

(5) Each general licensee licensed under the provisions of WAC 246-233-020(8), shall immediately notify the department in writing when the licensee decides to discontinue all activities involving radioactive materials authorized under the general license. Such notification shall include a description of how the generally licensed material was disposed and the results of facility surveys, if applicable, to confirm the absence of radioactive materials.

(6) Within sixty days of the occurrence of any of the following, each specific licensee shall provide notification to the department in writing of such occurrence, and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity so that the site, building, or outdoor area is suitable for release in accordance with chapter 246-246 WAC, or submit within twelve months of notification a decommissioning plan, if required by subsection (10)(a) of this section, and begin decommissioning upon approval of that plan if:

(a) The license has expired or has been revoked by the department; or

(b) The licensee has decided to permanently cease principal activities, as defined in this section, at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the site, building, or outdoor area is unsuitable for release in accordance with chapter 246-246 WAC; or

(c) No principal activities under the license have been conducted for a period of twenty-four months; or

(d) No principal activities have been conducted for a period of twenty-four months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with chapter 246-246 WAC.

(7) As used in this section, principal activities means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

(8) Coincident with the notification required by subsection (6) of this section, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to WAC 246-235-075 or as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to subsection (10)(d)(v) of this section. Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the department.

(9) The department may grant a request to extend the time periods established in subsection (6) of this section if the department determines that this relief is not detrimental to the public health and safety and is otherwise in the public inter-

est. The request must be submitted no later than thirty days before notification pursuant to subsection (6) of this section. The schedule for decommissioning set forth in subsection (6) of this section may not commence until the department has made a determination on the request.

(10)(a) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the department and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(i) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(ii) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(iii) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(iv) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(b) The department may approve an alternate schedule for submittal of a decommissioning plan required pursuant to subsection (6) of this section if the department determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

(c) Procedures such as those listed in (a) of this subsection with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

(d) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(i) A description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(ii) A description of planned decommissioning activities;

(iii) A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey;

(v) An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning;

(vi) A description of the physical security plan and material control and accounting plan provisions in place during decommissioning;

(vii) For decommissioning plans calling for completion of decommissioning later than twenty-four months after plan approval, the plan shall include a justification for the delay based on the criteria in subsection (12) of this section.

(e) The proposed decommissioning plan will be approved by the department if the information therein demonstrates that the decommissioning will be completed as soon as practicable and that the health and safety of workers and the public will be adequately protected.

(11)(a) Except as provided in subsection (12) of this section, licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than twenty-four months following the initiation of decommissioning.

(b) Except as provided in subsection (12) of this section, when decommissioning involves the entire site, the licensee shall request license termination as soon as practicable but no later than twenty-four months following the initiation of decommissioning.

(12) The department may approve a request for an alternative schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the department determines that the alternative is warranted by consideration of the following:

(a) Whether it is technically feasible to complete decommissioning within the allotted twenty-four-month period;

(b) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted twenty-four-month period;

(c) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(d) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(e) Other site-specific factors which the department may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground water treatment activities, monitored natural ground water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(13) As the final step in decommissioning, the licensee shall:

(a) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed certificate of disposition of radioactive material or equivalent information; and

(b) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in chapter 246-246 WAC. The licensee shall, as appropriate:

(i) Report levels of gamma radiation in units of millisieverts (microrentgen) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (disintegrations per minute or microcuries) per one hundred square centimeters—removable and fixed—for surfaces, megabecquerels (microcuries) per milliliter for water, and becquerels (picocuries) per gram for solids such as soils or concrete; and

(ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(14) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the department determines that:

(a) Radioactive material has been properly disposed;

(b) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(c)(i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in chapter 246-246 WAC; or

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in chapter 246-246 WAC; and

(d) Records required by subsections (16) and (18) of this section have been received.

(15) Specific licenses for uranium and thorium milling are exempt from subsections (6)(d), (9) and (10) of this section with respect to reclamation of tailings impoundments and/or waste disposal areas.

(16) Prior to license termination, each licensee authorized to possess radioactive material with a half-life greater than one hundred twenty days, in an unsealed form, shall forward the following records to the department:

(a) Records of disposal required by WAC 246-221-230 (8)(a); and

(b) Records of results required by WAC 246-221-230 (7)(h).

(17) If licensed activities are transferred or assigned in accordance with WAC 246-232-050(2), each licensee authorized to possess radioactive material, with a half-life greater than one hundred twenty days, in an unsealed form, shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(a) Records of disposal required by WAC 246-221-230 (8)(a); and

(b) Records of results required by WAC 246-221-230 (7)(h).

(18) Prior to license termination, each licensee shall forward the records required by WAC 246-235-075(6) to the department.

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-232-060, filed 3/15/00, effective 4/15/00; 99-15-105, § 246-232-060, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080, 97-08-095, § 246-232-060, filed 4/2/97, effective 5/3/97; 91-15-112 (Order 184), § 246-232-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-19-330, filed 9/16/83.]

WAC 246-232-070 Modification and revocation of licenses. (1) The terms and conditions of all licenses shall be subject to amendment, revision, or modification, or the license may be suspended or revoked by reason of amendments to the act, or by reason of rules, regulations, and orders issued by the department.

(2) Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under provisions of the act, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the department to refuse to grant a license on an original application, or for violation of, or failure to observe any of the terms and conditions of the

act, or of the license, or of any rule, regulation, or order of the department.

(3) Except in cases of willful disregard for the regulations or applicable license conditions or those in which the public health, interest, or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefore, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-19-350, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-350, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-350, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-180.]

WAC 246-232-080 Transfer of material. (1) No licensee shall transfer radioactive material except as authorized pursuant to this section.

(2) Except as otherwise provided in the license and subject to the provisions of this section, any licensee may transfer radioactive material:

(a) To the department. A licensee may transfer material to the department only after receiving prior approval from the department;

(b) To the United States Department of Energy;

(c) To any person exempt from the regulations in this part to the extent permitted under such exemption;

(d) To any person authorized to receive such material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the department, the United States Nuclear Regulatory Commission, any agreement state or any licensing state, or to any person otherwise authorized to receive such material by the federal government or any agency thereof, the department, any agreement state or any licensing state; or

(e) As otherwise authorized by the department in writing.

(3) Before transferring radioactive material to a specific licensee of the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state, or to a general licensee who is required to register with the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state prior to receipt of the radioactive material, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred.

(4) The following methods for the verification required by subsection (3) of this section are acceptable:

(a) The transferor may obtain for possession, and read, a current copy of the transferee's specific license or registration certificate;

(b) The transferor may obtain for possession a written certification from the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date;

(c) For emergency shipments the transferor may accept oral certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date: Provided, That the oral certification is confirmed in writing within ten days;

(d) The transferor may obtain other sources of information compiled by a reporting service from official records of the department, the United States Nuclear Regulatory Commission, the licensing agency of an agreement state or a licensing state as to the identity of licensees and the scope and expiration dates of licenses and registration; or

(e) When none of the methods of verification described in subsection (4) of this section are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the department, the United States Nuclear Regulatory Commission, or the licensing agency of an agreement state or a licensing state that the transferee is licensed to receive the radioactive material.

(5) Preparation for shipment and transport of radioactive material shall be in accordance with the provisions of WAC 246-232-090.

(6) The requirements of subsection (4) of this section notwithstanding, no verification is required when returning used, unused or decayed sources of radiation to the original manufacturer, (e.g., industrial radiography sources, teletherapy sources, portable moisture/density gauge sources, fixed gauge sources, and Mo-99/Tc-99m generators).

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-19-400, filed 12/11/86. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-19-400, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-400, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-170.]

WAC 246-232-090 Transportation. No person shall deliver radioactive material to a carrier for transport or transport radioactive material except as authorized in a general or specific license issued by the department or as exempted in chapter 246-231 WAC. General licenses for transportation of radioactive material and other transportation requirements are found in chapter 246-231 WAC.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-232-090, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-19-500, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-19-500, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-500, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-220.]

WAC 246-232-120 Schedule B, exempt quantities of radioactive materials. (See also WAC 246-232-010(2).)

Radioactive Material	Microcuries
Antimony-122 (Sb-122)	100
Antimony-124 (Sb-124)	10
Antimony-125 (Sb-125)	10
Arsenic-73 (As-73)	100
Arsenic-74 (As-74)	10
Arsenic-76 (As-76)	10
Arsenic-77 (As-77)	100
Barium-131 (Ba-131)	10
Barium-133 (Ba-133)	10
Barium-140 (Ba-140)	10
Bismuth-210 (Bi-210)	1
Bromine-82 (Br-82)	10
Cadmium-109 (Cd-109)	10
Cadmium-115m (Cd-115m)	10
Cadmium-115 (Cd-115)	100
Calcium-45 (Ca-45)	10
Calcium-47 (Ca-47)	10
Carbon-14 (C-14)	100
Cerium-141 (Ce-141)	100
Cerium-143 (Ce-143)	100
Cerium-144 (Ce-144)	1
Cesium-129 (Cs-129)	100
Cesium-131 (Cs-131)	1,000
Cesium-134m (Cs-134m)	100
Cesium-134 (Cs-134)	1
Cesium-135 (Cs-135)	10
Cesium-136 (Cs-136)	10
Cesium-137 (Cs-137)	10
Chlorine-36 (Cl-36)	10
Chlorine-38 (Cl-38)	10
Chromium-51 (Cr-51)	1,000
Cobalt-57 (Co-57)	100
Cobalt-58m (Co-58m)	10
Cobalt-58 (Co-58)	10
Cobalt-60 (Co-60)	1
Copper-64 (Cu-64)	100
Dysprosium-165 (Dy-165)	10
Dysprosium-166 (Dy-166)	100
Erbium-169 (Er-169)	100
Erbium-171 (Er-171)	100
Europium-152 (Eu-152) 9.2h	100
Europium-152 (Eu-152) 13 yr	1
Europium-154 (Eu-154)	1
Europium-155 (Eu-155)	10
Fluorine-18 (F-18)	1,000
Gadolinium-153 (Gd-153)	10
Gadolinium-159 (Gd-159)	100
Gallium-67 (Ga-67)	100
Gallium-72 (Ga-72)	10
Germanium-71 (Ge-71)	100
Gold-198 (Au-198)	100
Gold-199 (Au-199)	100
Hafnium-181 (Hf-181)	10
Holmium-166 (Ho-166)	100
Hydrogen-3 (H-3)	1,000
Indium-111 (In-111)	100

Radioactive Material	Microcuries
Indium-113m (In-113m)	100
Indium-114m (In-114m)	10
Indium-115m (In-115m)	100
Indium-115 (In-115)	10
Iodine-123 (I-123)	100
Iodine-125 (I-125)	1
Iodine-126 (I-126)	1
Iodine-129 (I-129)	0.1
Iodine-131 (I-131)	1
Iodine-132 (I-132)	10
Iodine-133 (I-133)	1
Iodine-134 (I-134)	10
Iodine-135 (I-135)	10
Iridium-192 (Ir-192)	10
Iridium-194 (Ir-194)	100
Iron-52 (Fe-52)	10
Iron-55 (Fe-55)	100
Iron-59 (Fe-59)	10
Krypton-85 (Kr-85)	100
Krypton-87 (Kr-87)	10
Lanthanum-140 (La-140)	10
Lutetium-177 (Lu-177)	100
Manganese-52 (Mn-52)	10
Manganese-54 (Mn-54)	10
Manganese-56 (Mn-56)	10
Mercury-197m (Hg-197m)	100
Mercury-197 (Hg-197)	100
Mercury-203 (Hg-203)	10
Molybdenum-99 (Mo-99)	100
Neodymium-147 (Nd-147)	100
Neodymium-149 (Nd-149)	100
Nickel-59 (Ni-59)	100
Nickel-63 (Ni-63)	10
Nickel-65 (Ni-65)	100
Niobium-93m (Nb-93m)	10
Niobium-95 (Nb-95)	10
Niobium-97 (Nb-97)	10
Osmium-185 (Os-185)	10
Osmium-191m (Os-191m)	100
Osmium-191 (Os-191)	100
Osmium-193 (Os-193)	100
Palladium-103 (Pd-103)	100
Palladium-109 (Pd-109)	100
Phosphorus-32 (P-32)	10
Platinum-191 (Pt-191)	100
Platinum-193m (Pt-193m)	100
Platinum-193 (Pt-193)	100
Platinum-197m (Pt-197m)	100
Platinum-197 (Pt-197)	100
Polonium-210 (Po-210)	0.1
Potassium-42 (K-42)	10
Potassium-43 (K-43)	10
Praseodymium-142 (Pr-142)	100
Praseodymium-143 (Pr-143)	100
Promethium-147 (Pm-147)	10
Promethium-149 (Pm-149)	10
Radium-226 (Ra-226)	0.1
Rhenium-186 (Re-186)	100
Rhenium-188 (Re-188)	100

Radioactive Material	Microcuries	Radioactive Material	Microcuries
Rhodium-103m (Rh-103m)	100	Yttrium-90 (Y-90)	10
Rhodium-105 (Rh-105)	100	Yttrium-91 (Y-91)	10
Rubidium-81 (Rb-81)	10	Yttrium-92 (Y-92)	100
Rubidium-86 (Rb-86)	10	Yttrium-93 (Y-93)	100
Rubidium-87 (Rb-87)	10	Zinc-65 (Zn-65)	10
Ruthenium-97 (Ru-97)	100	Zinc-69m (Zn-69m)	100
Ruthenium-103 (Ru-103)	10	Zinc-69 (Zn-69)	1,000
Ruthenium-105 (Ru-105)	10	Zirconium-93 (Zr-93)	10
Ruthenium-106 (Ru-106)	1	Zirconium-95 (Zr-95)	10
Samarium-151 (Sm-151)	10	Zirconium-97 (Zr-97)	10
Samarium-153 (Sm-153)	100	Any radioactive material not listed above	
Scandium-46 (Sc-46)	10	other than alpha emitting radioactive	
Scandium-47 (Sc-47)	100	material	0.1
Scandium-48 (Sc-48)	10		
Selenium-75 (Se-75)	10		
Silicon-31 (Is-31)	100		
Silver-105 (Ag-105)	10		
Silver-110m (Ag-110m)	1		
Silver-111 (Ag-111)	100		
Sodium-22 (Na-22)	10		
Sodium-24 (Na-24)	10		
Strontium-85 (Sr-85)	10		
Strontium-89 (Sr-89)	1		
Strontium-90 (Sr-90)	0.1		
Strontium-91 (Sr-91)	10		
Strontium-92 (Sr-92)	10		
Sulphur-35 (S-35)	100		
Tantalum-182 (Ta-182)	10		
Technetium-96 (Tc-96)	10		
Technetium-97m (Tc-97m)	100		
Technetium-97 (Tc-97)	100		
Technetium-99m (Tc-99m)	100		
Technetium-99 (Tc-99)	10		
Tellurium-125m (Te-125m)	10		
Tellurium-127m (Te-127m)	10		
Tellurium-127 (Te-127)	100		
Tellurium-129m (Te-129m)	10		
Tellurium-129 (Te-129)	100		
Tellurium-131m (Te-131m)	10		
Tellurium-132 (Te-132)	10		
Terbium-160 (Tb-160)	10		
Thallium-200 (Tl-200)	100		
Thallium-201 (Tl-201)	100		
Thallium-202 (Tl-202)	100		
Thallium-204 (Tl-204)	10		
Thulium-170 (Tm-170)	10		
Thulium-171 (Tm-171)	10		
Tin-113 (Sn-113)	10		
Tin-125 (Sn-125)	10		
Tungsten-181 (W-181)	10		
Tungsten-185 (W-185)	10		
Tungsten-187 (W-187)	100		
Vanadium-48 (V-48)	10		
Xenon-131m (Xe-131m)	1,000		
Xenon-133 (Xe-133)	100		
Xenon-135 (Xe-135)	100		
Ytterbium-169 (Yb-169)	10		
Ytterbium-175 (Yb-175)	100		
Yttrium-87 (Y-87)	10		

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-120, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-550, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-550, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-240.]

WAC 246-232-130 Schedule C, exempt concentrations. (See WAC 246-232-010(1).)

Element (atomic number)	Isotope	Column I Gas concentration $\mu\text{Ci}/\text{ml}^1$	Column II
			Liquid and solid concentration $\mu\text{Ci}/\text{ml}^2$
Antimony (51)	Sb-122		3×10^{-4}
	Sb-124		2×10^{-4}
	Sb-125		1×10^{-3}
Argon (18)	Ar-37	1×10^{-3}	
	Ar-41	4×10^{-7}	
Arsenic (33)	As-73		5×10^{-3}
	As-74		5×10^{-4}
	As-76		2×10^{-4}
	As-77		8×10^{-4}
Barium (56)	Ba-131		2×10^{-3}
	Ba-140		3×10^{-4}
Beryllium (4)	Be-7		2×10^{-2}
	Bismuth (83)	Bi-206	4×10^{-4}
Bromine (35)	Br-82	4×10^{-7}	3×10^{-3}
	Cadmium (48)	Cd-109		$2 \times 10^{-3}$
Cd-115m			3×10^{-4}
Cd-115			3×10^{-4}
Calcium (20)	Ca-45		9×10^{-5}
	Ca-47		5×10^{-4}
Carbon (6)	C-14	1×10^{-6}	8×10^{-3}
	Cerium (58)	Ce-141		$9 \times 10^{-4}$
Ce-143			4×10^{-4}
Ce-144			1×10^{-4}
Cesium (55)	Cs-131		2×10^{-2}
	Cs-134m		6×10^{-2}
	Cs-134		9×10^{-5}
	Chlorine (17)	Cl-38	9×10^{-7}	$4 \times 10^{-3}$
Chromium (24)	Cr-51		2×10^{-2}
	Cobalt (27)	Co-57		$5 \times 10^{-3}$
Co-58			1×10^{-3}
Co-60			5×10^{-4}
Copper (29)	Cu-64		3×10^{-3}
	Dysprosium (66)	Dy-165		$4 \times 10^{-3}$
Dy-166			4×10^{-4}

Element (atomic number)	Isotope	Column I Gas concentra- tion μCi/ml ¹	Column II	Element (atomic number)	Isotope	Column I Gas concentra- tion μCi/ml ¹	Column II
			Liquid and solid concentra- tion μCi/ml ²				Liquid and solid concentra- tion μCi/ml ²
Erbium (68)	Er-169		9x10 ⁻⁴	Rhenium (75)	Re-183		6x10 ⁻³
	Er-171		1x10 ⁻³		Re-186		9x10 ⁻⁴
Europium (63)	Eu-152		6x10 ⁻⁴		Re-188		6x10 ⁻⁴
	(9.2 h)			Rhodium (45)	Rh-103m		1x10 ⁻¹
	Eu-155		2x10 ⁻³		Rh-105		1x10 ⁻³
Fluorine (9)	F-18	2x10 ⁻⁶	8x10 ⁻³	Rubidium	Rb-86		7x10 ⁻⁴
Gadolinium (64)	Gd-153		2x10 ⁻³	Ruthenium (44)	Ru-97		4x10 ⁻³
	Gd-159		8x10 ⁻⁴		Ru-103		8x10 ⁻⁴
Gallium (31)	Ga-72		4x10 ⁻⁴		Ru-105		1x10 ⁻³
Germanium (32)	Ge-71		2x10 ⁻²		Ru-106		1x10 ⁻⁴
Gold (79)	Au-196		2x10 ⁻³	Samarium (62)	Sm-153		8x10 ⁻⁴
	Au-198		5x10 ⁻⁴	Scandium (21)	Sc-46		4x10 ⁻⁴
	Au-199		2x10 ⁻³		Sc-47		9x10 ⁻⁴
Hafnium (72)	Hf-181		7x10 ⁻⁴		Sc-48		3x10 ⁻⁴
Hydrogen (1)	H-3	5x10 ⁻⁶	3x10 ⁻²	Selenium (34)	Se-75		3x10 ⁻³
Indium (49)	In-113m		1x10 ⁻²	Silicon (14)	Si-31		9x10 ⁻³
	In-114m		2x10 ⁻⁴	Silver (47)	Ag-105		1x10 ⁻³
Iodine (53)	I-125	3x10 ⁻⁹	2x10 ⁻⁵		Ag-110m		3x10 ⁻⁴
	I-126	3x10 ⁻⁹	2x10 ⁻⁵		Ag-111		4x10 ⁻⁴
	I-131	3x10 ⁻⁹	2x10 ⁻⁵	Sodium (11)	Na-24		2x10 ⁻³
	I-132	8x10 ⁻⁸	6x10 ⁻⁴	Strontium (38)	Sr-85		1x10 ⁻³
	I-133	1x10 ⁻⁸	7x10 ⁻⁵		Sr-89		1x10 ⁻⁴
Iridium (77)	I-134	2x10 ⁻⁷	1x10 ⁻³		Sr-91		7x10 ⁻⁴
	Ir-190		2x10 ⁻³		Sr-92		7x10 ⁻⁴
	Ir-192		4x10 ⁻⁴	Sulfur (16)	S-35	9x10 ⁻⁸	6x10 ⁻⁴
	Ir-194		3x10 ⁻⁴	Tantalum (73)	Ta-182		4x10 ⁻⁴
Iron (26)	Fe-55		8x10 ⁻³	Technetium (43)	Tc-96m		1x10 ⁻¹
	Fe-59		6x10 ⁻⁴		Tc-96		1x10 ⁻³
Krypton (36)	Kr-85m	1x10 ⁻⁶		Tellurium (52)	Te-125m		2x10 ⁻³
	Kr-85		3x10 ⁻⁶		Te-127m		6x10 ⁻⁴
Lanthanum (57)	La-140		2x10 ⁻⁴		Te-127		3x10 ⁻³
Lead (82)	Pb-203		4x10 ⁻³		Te-129m		3x10 ⁻⁴
Lutetium (71)	Lu-177		1x10 ⁻³		Te-131m		6x10 ⁻⁴
Manganese (25)	Mn-52		3x10 ⁻⁴		Te-132		3x10 ⁻⁴
	Mn-54		1x10 ⁻³		Te-133		4x10 ⁻⁴
	Mn-56		1x10 ⁻³	Terbium (65)	Tb-160		4x10 ⁻⁴
Mercury (80)	Hg-197m		2x10 ⁻³	Thallium (81)	Tl-200		4x10 ⁻³
	Hg-197		3x10 ⁻³		Tl-201		3x10 ⁻³
	Hg-203		2x10 ⁻⁴		Tl-202		1x10 ⁻³
Molybdenum (42)	Mo-99		2x10 ⁻³		Tl-204		1x10 ⁻³
Neodymium (60)	And-147		6x10 ⁻⁴	Thulium (69)	Tm-170		5x10 ⁻⁴
	And-149		3x10 ⁻³		Tm-171		5x10 ⁻³
Nickel (28)	Ni-65		1x10 ⁻³	Tin (50)	Sn-113		9x10 ⁻⁴
Niobium (Colum- bium)(41)	Nb-95		1x10 ⁻³		Sn-125		2x10 ⁻⁴
	Nb-97		9x10 ⁻³	Tungsten (Wolfram) (74)	W-181		4x10 ⁻³
Osmium (76)	So-185		7x10 ⁻⁴	Vanadium (23)	V-48		3x10 ⁻⁴
	So-191m		3x10 ⁻²	Xenon (54)	Xe-131m	4x10 ⁻⁶	
	So-191		2x10 ⁻³		Xe-133	3x10 ⁻⁶	
	So-193		6x10 ⁻⁴		Xe-135	1x10 ⁻⁶	
Palladium (46)	Pd-103		3x10 ⁻³	Ytterbium (70)	Yb-175		1x10 ⁻³
	Pd-109		9x10 ⁻⁴	Yttrium (39)	Y-90		2x10 ⁻⁴
Phosphorus (15)	P-32		2x10 ⁻⁴		Y-91m		3x10 ⁻²
Platinum (78)	Pt-191		1x10 ⁻³		Y-91		3x10 ⁻⁴
	Pt-193m		1x10 ⁻²		Y-92		6x10 ⁻⁴
	Pt-197m		1x10 ⁻²		Y-93		3x10 ⁻⁴
Potassium (19)	Pt-197		1x10 ⁻³	Zinc (30)	Zn-65		1x10 ⁻³
	K-42		3x10 ⁻³		Zn-69m		7x10 ⁻⁴
Praseodymium (59)	Pr-142		3x10 ⁻⁴		Zn-69		2x10 ⁻²
	Pr-143		5x10 ⁻⁴	Zirconium (40)	Zr-95		6x10 ⁻⁴
	Pr-147		2x10 ⁻³		Zr-97		2x10 ⁻⁴
Promethium (61)	Pm-147		2x10 ⁻³				
Radium (88)	Pm-149		4x10 ⁻⁴	Beta and/or gamma emitting radioactive material not listed above with half-life less than 3 years		1x10 ⁻¹⁰	1x10 ⁻⁶
	Ra-226		1x10 ⁻⁷				
	Ra-228		3x10 ⁻⁷				

- Notes: ¹ Values are given in Column I only for those materials normally used as gases
² $\mu\text{Ci/gm}$ for solids
- Note 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule C the activity stated is that of the parent isotope and takes into account the daughters.
- Note 2: For purposes of WAC 246-232-010(1) where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule C for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

Example:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

WAC 246-232-140 Schedule D.

ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES A	AVERAGE B C F	MAXIMUM B D F	REMOVABLE B E F WIPE LIMITS
U-nat, U-235, U-238, and associated decay products	5,000 dpm α /100 cm ²	15,000 dpm α /100 cm ²	1,000 dpm α /100 cm ²
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm ²	300 dpm/100 cm ²	20 dpm/100 cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm ²	3000 dpm/100 cm ²	200 dpm/100 cm ²
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except SR-90 and others noted above	5000 dpm $\beta\gamma$ /100 cm ²	15,000 dpm $\beta\gamma$ /100 cm ²	1000 dpm $\beta\gamma$ /100 cm ²

- A Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.
- B As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
- C Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.
- D The maximum contamination level applies to an area of not more than 100 cm².
- E The amount of removable radioactive material per 100 cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.
- F The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-590, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-590, filed 9/16/83.]

WAC 246-232-990 Fees. Fees are required from all applicants, licensees, or registrants. Chapter 246-254 WAC

[Title 246 WAC—p. 346]

Note 3: For the purpose of determining concentration in a product or device, the total quantity of radioactive material present is divided by only that weight or volume of the discrete part or component throughout which the radioactive material is relatively uniformly distributed. If the weight or volume of this part or component cannot be determined then the product or device should be evaluated on the basis of the total quantity of radioactive material present.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-130, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-580, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-580, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-580, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-250.]

specifies fees for users of radiation subject to regulation under chapters 246-220 through 246-255 WAC.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-990, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-370, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-370, filed 11/30/79, effective 1/1/80.]

**Chapter 246-233 WAC
 RADIOACTIVE MATERIALS—GENERAL
 LICENSES**

WAC	Purpose and scope.
246-233-001	General licenses—Source material.
246-233-010	General licenses—Radioactive material other than source material.
246-233-020	

WAC 246-233-001 Purpose and scope. This chapter establishes general licenses for the possession and use of radioactive material contained in certain items and a general license for ownership of radioactive material. Chapter 246-232 WAC also contains provisions applicable to the subject matter of this part.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-233-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-233-001, filed

12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-21-010, filed 11/30/79, effective 1/1/80. Formerly chapter 402-20 WAC.]

WAC 246-233-010 General licenses—Source material. (1) A general license is hereby issued authorizing use, possession, and transfer of not more than fifteen pounds of source material at any one time by persons in the following categories:

(a) Pharmacists using the source material solely for the preparation of medicinal compounds;

(b) Physicians using the source material for medicinal purposes;

(c) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs;

(d) Commercial and industrial firms, and research, educational, and medical institutions, and state and local government agencies for research, development, educational, operational, or commercial purposes: And provided, That no such person shall, pursuant to this general license, receive more than a total of one hundred fifty pounds of source material in any one calendar year.

(2) Persons who receive, possess, use, or transfer source material pursuant to the general license issued in subsection (1) of this section are exempt from the provisions of chapters 246-221 and 246-222 WAC to the extent that such receipt, possession, use, or transfer is within the terms of such general license: Provided, however, That this exemption shall not be deemed to apply to any such person who is also in possession of source material under a specific license issued pursuant to chapter 246-235 WAC.

(3) A general license is hereby issued authorizing the receipt of title to source material without regard to quantity. This general license does not authorize any person to receive, possess, use, or transfer source material.

(4) Depleted uranium in industrial products and devices.

(a) A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of paragraphs (4)(b), (c), (d), and (e) of this section, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

(b) The general license in paragraph (4)(a) of this section applies only to industrial products or devices which have been manufactured either in accordance with a specific license issued to the manufacturer of the products or devices pursuant to WAC 246-235-091 or in accordance with a specific license issued to the manufacturer by the United States Nuclear Regulatory Commission or an agreement state which authorizes manufacture of the products or devices for distribution to persons generally licensed by the United States Nuclear Regulatory Commission or an agreement state.

(c)(i) Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph (4)(a) of this section shall file department form RHF-20 "Registration certificate - Use of depleted uranium under general license," with the department. The form shall be submitted within thirty days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish

on department form RHF-20 the following information and such other information as may be required by that form:

(A) Name and address of the registrant;

(B) A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph (4)(a) of this section and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

(C) Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in item (4)(c)(i)(B) of this section.

(ii) The registrant possessing or using depleted uranium under the general license established by paragraph (4)(a) of this section shall report in writing to the department any changes in information previously furnished on the "Registration certificate - Use of depleted uranium under general license." The report shall be submitted within thirty days after the effective date of such change.

(d) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph (4)(a) of this section:

(i) Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium.

(ii) Shall not abandon such depleted uranium.

(iii) Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provision of chapter 246-232 WAC. In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph (4)(a) of this section the transferor shall furnish the transferee a copy of this regulation and a copy of department form RHF-20.

In the case where the transferee receives the depleted uranium pursuant to a general license contained in the United States Nuclear Regulatory Commission's or agreement state's regulation equivalent to paragraph (4)(a) of this section the transferor shall furnish the transferee a copy of this regulation and a copy of department form RHF-20 accompanied by a note explaining that use of the product or device is regulated by the United States Nuclear Regulatory Commission or agreement state under requirements substantially the same as those in this regulation.

(iv) Shall maintain and make available to the department upon request the name and address of the person receiving the depleted uranium pursuant to such transfer.

(v) Shall not export such depleted uranium except in accordance with a license issued by the United States Nuclear Regulatory Commission pursuant to 10 CFR Part 110.

(e) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph (4)(a) of this section is exempt from the requirements of chapters 246-221 and 246-222 WAC of these regulations with respect to the depleted uranium covered by that general license.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-233-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-233-010, filed 7/24/91, effective

8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-233-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-21-030, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-21-030, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-030.]

WAC 246-233-020 General licenses*—Radioactive material other than source material.

*Note: Different general licenses are issued in this section, each of which has its own specific conditions and requirements.

(1) **Certain devices and equipment.** A general license is hereby issued to transfer, receive, acquire, own, possess, and use radioactive material incorporated in the following devices or equipment which have been manufactured, tested and labeled by the manufacturer in accordance with a specific license issued to the manufacturer by the United States Nuclear Regulatory Commission for use pursuant to Section 31.3 of 10 CFR Part 31. This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-050, 246-220-060, 246-220-070, chapters 246-232, 246-221** and 246-222 WAC.

(a) **Static elimination device.** Devices designed for use as static eliminators which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of Polonium-210 per device.

(b) **Ion generating tube.** Devices designed for ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of Polonium-210 per device or a total of not more than 50 millicuries of Hydrogen-3 (tritium) per device.

** Attention is directed particularly to the provisions of chapter 246-221 WAC of these regulations which relate to the labeling of containers.

(2) Reserved.

(3) Reserved.

(4) **Certain measuring, gauging or controlling devices.**

(a) A general license is hereby issued to commercial and industrial firms and research, educational and medical institutions, individuals in the conduct of their business, and state or local government agencies to own, acquire, receive, possess, use or transfer, in accordance with the provisions of (b), (c), and (d) of this subsection, radioactive material excluding special nuclear material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere.

(b) The general license in (a) of this subsection applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with the specifications contained in a specific license issued by the department pursuant to WAC 246-235-093 or in accordance with the Nuclear Regulatory Commission, an agreement state or a licensing state, which authorizes distribution of devices to persons generally licensed by the United States Nuclear Regulatory Commission, an agreement state or licensing state**.

*Note: Regulations under the Federal Food, Drug, and Cosmetic Act authorizing the use of radioactive control devices in food production require certain additional labeling thereon which is found in Section 179.21 of 21 CFR Part 179.

(c) Any person who owns, acquires, receives, possesses, uses or transfers radioactive material in a device pursuant to the general license in (a) of this subsection:

(i) Shall assure that all labels affixed to the device at the time of receipt and bearing a statement that removal of the label is prohibited are maintained thereon and shall comply with all instructions and precautions provided by such labels;

(ii) Shall assure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as are specified in the label, however:

(A) Devices containing only krypton need not be tested for leakage of radioactive material; and

(B) Devices containing only tritium or not more than 100 microcuries of other beta and/or gamma emitting material or 10 microcuries of alpha emitting material need not be tested for any purpose. Devices held in storage in the original shipping container prior to initial installation need not be tested until immediately prior to use;

(iii) Shall assure that the tests required by (c)(ii) of this subsection and other testing, installing, servicing, and removing from installation involving the radioactive materials, its shielding or containment, are performed:

(A) In accordance with the instructions provided by the labels; or

(B) By a person holding a specific license from the department or from the United States Nuclear Regulatory Commission or from any agreement state or from a licensing state to perform such activities;

(iv) Shall maintain records showing compliance with the requirements of (c)(ii) and (iii) of this subsection. The records shall show the results of tests. The records also shall show the dates of performance and the names of persons performing, testing, installing, servicing, and removing from installation concerning the radioactive material, its shielding or containment. Records of tests for leakage of radioactive material required by (c)(ii) of this subsection shall be maintained for one year after the next required leak test is performed or the sealed source is transferred or disposed. Records of tests of the on/off mechanism and indicator required by (c)(ii) of this subsection shall be maintained for one year after the next required test of the on/off mechanism and indicator is performed or the sealed source is transferred or disposed. Records of other testing, installation, servicing, and removal from installation required by (c)(iii) of this subsection shall be maintained for a period of two years from the date of the recorded event or until the device is transferred or disposed;

(v) Upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on/off mechanism or indicator, or upon the detection of 0.005 microcuries or more removable radioactive material, shall immediately suspend operation of the device until it has been repaired by the manufacturer or other person holding a specific license from the department, the United States Nuclear Regulatory Commission, or from an agreement state or a licensing state to repair such devices, or disposed by transfer to a person authorized by a specific license to receive the radioactive material

contained in the device and, within thirty days, furnish to the department a written report containing a brief description of the event and the remedial action taken;

(vi) Shall not abandon the device containing radioactive material;

(vii) Except as provided in (c)(viii) of this subsection, shall transfer or dispose the device containing radioactive material only by transfer to a person holding a specific license of the department, the United States Nuclear Regulatory Commission, or an agreement state, or a licensing state whose specific license authorizes the person to receive the device and within thirty days after transfer of a device to a specific licensee shall furnish to the department a report containing identification of the device by manufacturer's name, model number and the name and address of the person receiving the device. No report is required if the device is transferred to the specific licensee in order to obtain a replacement device;

(viii) Shall transfer the device to another general licensee only:

(A) Where the device remains in use at a particular location. In such case, the transferor shall give the transferee a copy of this subsection and any safety documents identified in the label of the device and within thirty days of the transfer, report to the department the manufacturer's name, model number of device transferred, the name and address of the transferee, and the name and/or position of an individual who may constitute a point of contact between the department and the transferee; or

(B) Where the device is held in storage in the original shipping container at its intended location of use prior to initial use by a general licensee:

(ix) Shall comply with the provisions of WAC 246-221-240 and 246-221-250 for reporting radiation incidents, theft or loss of licensed material, but shall be exempt from the other requirements of chapters 246-221 and 246-222 WAC.

(d) The general license in (a) of this subsection does not authorize the manufacture, import or export of devices containing radioactive material.

(e) The general license provided in this subsection is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, and 246-232-090.

(5) Luminous safety devices for aircraft.

(a) A general license is hereby issued to own, receive, acquire, possess and use tritium or Promethium-147 contained in luminous safety devices for use in aircraft, provided:

(i) Each device contains not more than 10 curies of tritium or 300 millicuries of Promethium-147; and

(ii) Each device has been manufactured, assembled or imported in accordance with a specific license issued by the United States Nuclear Regulatory Commission, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer or assembler of such device pursuant to licensing requirements equivalent to those in Section 32.53 of 10 CFR Part 32 of the regulations of the United States Nuclear Regulatory Commission.

(b) Persons who own, receive, acquire, possess or use luminous safety devices pursuant to the general license in this subsection are exempt from the requirements of chapters 246-221 and 246-222 WAC except that they shall comply with the provisions of WAC 246-221-240 and 246-221-250.

(c) This general license does not authorize the manufacture, assembly, or repair of luminous safety devices containing tritium or Promethium-147.

(d) This general license does not authorize the ownership, receipt, acquisition, possession or use of Promethium-147 contained in instrument dials.

(e) This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-050, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, and 246-232-090.

(6) **Ownership of radioactive material.** A general license is hereby issued to own radioactive material without regard to quantity. Notwithstanding any other provisions of this chapter, this general license does not authorize the manufacture, production, transfer, receipt, possession or use of radioactive material.

(7) Calibration and reference sources.

(a) A general license is hereby issued to those persons listed below to own, receive, acquire, possess, use and transfer, in accordance with the provisions of (d) and (e) of this subsection, Americium-241 in the form of calibration or reference sources:

(i) Any person who holds a specific license issued by the department which authorizes that person to receive, possess, use and transfer radioactive material; or

(ii) Any person who holds a specific license issued by the United States Nuclear Regulatory Commission which authorizes that person to receive, possess, use and transfer special nuclear material.

(b) A general license is hereby issued to own, receive, possess, use and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of (d) and (e) of this subsection to any person who holds a specific license issued by the department which authorizes that person to receive, possess, use and transfer radioactive material.

(c) A general license is hereby issued to own, receive, possess, use and transfer Radium-226 in the form of calibration or reference sources in accordance with the provisions of (d) and (e) of this subsection to any person who holds a specific license issued by the department which authorizes that person to receive, possess, use and transfer radioactive material.

(d) The general licenses in (a), (b) and (c) of this subsection apply only to calibration or reference sources which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the United States Nuclear Regulatory Commission pursuant to Section 32.57 of 10 CFR Part 32 or Section 70.39 of 10 CFR Part 70 or which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer by the department or any agreement state or licensing state pursuant to licensing requirements equivalent to those contained in Section 32.57 of 10 CFR Part 32 or Section 70.39 of 10 CFR

Part 70 of the regulations of the United States Nuclear Regulatory Commission.

(e) The general licenses provided in (a), (b) and (c) of this subsection are subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, 246-232-090, chapters 246-221 and 246-222 WAC.

In addition, persons who own, receive, acquire, possess, use or transfer one or more calibration or reference sources pursuant to these general licenses:

(i) Shall not possess at any one time, at any one location of storage or use, more than 5 microcuries of Americium-241 and 5 microcuries of plutonium and 5 microcuries of Radium-226 in such sources;

(ii) Shall not receive, possess, use or transfer such source unless the source, or the storage container, bears a label which includes one of the following statements or a substantially similar statement which contains the information called for in the following statement:

(A) The receipt, possession, use and transfer of this source, Model , Serial No. , are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS (AMERICIUM-241). (PLUTONIUM)*. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE

.....
Name of manufacturer or importer

*Note: Showing only the name of the appropriate material.

(B) The receipt, possession, use and transfer of this source, Model , Serial No. , are subject to a general license and the regulations of any licensing state. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS RADIUM-226. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

.....
Name of manufacturer or importer

(iii) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the department, the United States Nuclear Regulatory Commission, or an agreement state or licensing state to receive the source;

(iv) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain Americium-241, Plutonium, or Radium-226/Radon-222 which might otherwise escape during storage; and

(v) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(f) These general licenses do not authorize the manufacture of calibration or reference sources containing Americium-241, Plutonium, or Radium-226.

(8) *General license for use of radioactive material for certain in vitro clinical or laboratory testing.**

(a) A general license is hereby issued to any physician, veterinarian, clinical laboratory or hospital to receive, acquire, possess, transfer or use, for any of the following stated tests, in accordance with the provisions of or use, for any of the following stated tests, in accordance with the provisions of (b), (c), (d), (e), and (f) of this subsection the following radioactive materials in prepackaged units:

(i) Iodine-125, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(ii) Iodine-131, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(iii) Carbon-14, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(iv) Hydrogen-3 (tritium), in units not exceeding 50 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(v) Iron-59, in units not exceeding 20 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(vi) Cobalt-57, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(vii) Selenium-75, in units not to exceed 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(viii) Mock Iodine-125 reference or calibration sources, in units not exceeding 0.05 microcurie of Iodine-129 and 0.005 microcurie of Americium-241 each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

*Note: The new drug provisions of the Federal Food, Drug and Cosmetic Act also govern the availability and use of any specific diagnostic drugs in interstate commerce.

(b) No person shall receive, acquire, possess, use or transfer radioactive material pursuant to the general license established by (a) of this subsection until that person has received a validated copy of department Form RHF-15 "Certificate-in vitro testing with radioactive material under general license." Annual validation requires resubmittal of revised department Form RHF-15 and submittal of the annual fee to the department. The physician, veterinarian, clinical laboratory or hospital shall furnish on department Form RHF-15 the following information and such other information as may be required by that form:

(i) Name and address of the physician, veterinarian, clinical laboratory or hospital;

(ii) The location of use; and

(iii) A statement that the physician, veterinarian, clinical laboratory or hospital has appropriate radiation measuring instruments to carry out *in vitro* clinical or laboratory tests with radioactive material as authorized under the general license in (a) of this subsection and that such tests will be performed only by personnel competent in the use of such instruments and in the handling of the radioactive material.

(c) A person who receives, acquires, possesses or uses radioactive material pursuant to the general license established by (a) of this subsection shall comply with the following:

(i) The general licensee shall not possess at any one time, pursuant to the general license in (a) of this subsection at any one location of storage or use, a total amount of Iodine-125, Iodine-131, Selenium-75, Iron-59, and/or Cobalt-57 in excess of 200 microcuries.

(ii) The general licensee shall store the radioactive material, until used, in the original shipping container or in a container providing equivalent radiation protection.

(iii) The general licensee shall use the radioactive material only for the uses authorized by (a) of this subsection.

(iv) The general licensee shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the department, the United States Nuclear Regulatory Commission, any agreement state or licensing state, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the supplier.

(v) The general licensee shall dispose of the Mock Iodine-125 reference or calibration sources described in (a)(viii) of this subsection as required by WAC 246-221-170.

(d) The general licensee shall not receive, acquire, possess, or use radioactive material pursuant to (a) of this subsection:

(i) Except as prepackaged units which are labeled in accordance with the provision of an applicable specific license issued pursuant to WAC 246-235-097 or in accordance with the provisions of a specific license issued by the United States Nuclear Regulatory Commission, or any agreement state or licensing state which authorizes the manufacture and distribution of Iodine-125, Iodine-131, Carbon-14, Hydrogen-3 (tritium), Iron-59, Selenium-75, Cobalt-57, or Mock Iodine-125 to persons generally licensed under this subsection or its equivalent; and

(ii) Unless one of the following statements, as appropriate, or a substantially similar statement which contains the information called for in one of the following statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

This radioactive material shall be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, posses-

sion, use and transfer are subject to the regulations and a general license of the United States Nuclear Regulatory Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority.

.....
Name of manufacturer

This radioactive material shall be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a licensing state.

.....
Name of manufacturer

(e) The physician, veterinarian, clinical laboratory or hospital possessing or using radioactive material under the general license of (a) of this subsection shall report in writing to the department, any changes in the information previously furnished in the "Certificate - *in vitro* testing with radioactive material under general license," department Form RHF-15. The report shall be furnished within thirty days after the effective date of such change.

(f) This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-090 and 246-220-100. In addition, any person using radioactive material pursuant to the general license of (a) of this subsection is exempt from the requirements of chapters 246-221 and 246-222 WAC with respect to radioactive material covered by that general license, except that such persons using the Mock Iodine-125 described in (a)(viii) of this subsection shall comply with the provisions of WAC 246-221-170, 246-221-240, and 246-221-250 and of these regulations.

(9) **Ice detection devices.**

(a) A general license is hereby issued to own, receive, acquire, possess, use and transfer Strontium-90 contained in ice detection devices, provided each device contains not more than 50 microcuries of Strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the United States Nuclear Regulatory Commission or each device has been manufactured in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer of such device pursuant to licensing requirements equivalent to those in Section 32.61 of 10 CFR Part 32 of the regulations of the United States Nuclear Regulatory Commission.

(b) Persons who own, receive, acquire, possess, use or transfer Strontium-90 contained in ice detection devices pursuant to the general license in (a) of this subsection:

(i) Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating to the device, discontinue use of the device until it has been inspected, tested for leakage and repaired by a person holding a specific license from the United States Nuclear

Regulatory Commission or an agreement state to manufacture or service such devices; or shall dispose of the device pursuant to the provisions of these regulations;

(ii) Shall assure that all labels affixed to the device at the time of receipt, and which bear a statement which prohibits removal of the labels, are maintained thereon; and

(iii) Are exempt from the requirements of chapters 246-221 and 246-222 WAC except that such persons shall comply with the provisions of WAC 246-221-170, 246-221-240, and 246-221-250.

(c) This general license does not authorize the manufacture, assembly, disassembly or repair of Strontium-90 sources in ice detection devices.

(d) This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, and 246-232-090.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-233-020, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-233-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-233-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-21-050, filed 12/11/86; 83-19-050 (Order 2026), § 402-21-050, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-21-050, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-21-050, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-040.]

Chapter 246-235 WAC

RADIOACTIVE MATERIALS—SPECIFIC LICENSES

WAC

246-235-001	Purpose and scope.
246-235-010	Filing application for specific licenses.
246-235-020	General requirements for the issuance of specific licenses.
246-235-030	Issuance of specific licenses.
246-235-040	Expiration of licenses.
246-235-050	Renewal of license.
246-235-055	Precedence of license condition over regulation.
246-235-060	Amendment of licenses at request of licensee.
246-235-070	Agency action on applications to renew or amend.
246-235-075	Financial assurance and recordkeeping for decommissioning.
246-235-077	Special requirements for emergency planning.
246-235-080	Special requirements for issuance of specific licenses for medical use of radioactive material.
246-235-084	Special requirements for issuance of specific licenses for industrial radiography.
246-235-086	Special requirements for environmentally significant licensing actions.
246-235-090	Special requirements for specific licenses of broad scope.
246-235-091	Manufacture and distribution of industrial products containing depleted uranium under general license.
246-235-093	Manufacture, assembly or distribution of devices under general license.
246-235-095	Manufacture, assembly, or distribution of luminous safety devices, certain calibration sources or ice detectors under general license.
246-235-097	Manufacture and distribution of radioactive material for certain in vitro clinical or laboratory testing under general license.
246-235-100	Manufacture, preparation, or commercial transfer of radiopharmaceuticals for medical use.
246-235-102	Manufacture and distribution of sources or devices containing radioactive material for medical use.
246-235-105	Manufacture, assembly or distribution of radioactive material exempt from regulation.
246-235-110	Special requirements for issuance of specific licenses for source material milling.

246-235-120	Schedule A groups of medical uses of radioactive material (ref. WAC 246-235-080(3) and 246-235-100(9)).
246-235-130	Appendix—General laboratory rules for safe use of unsealed sources.
246-235-140	Schedule B, limits for broad licenses.
246-235-150	Schedule C—Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release.

WAC 246-235-001 Purpose and scope. (1) This chapter prescribes requirements for the issuance of specific licenses.

(2) The provisions and requirements of this chapter are in addition to, and not in substitution for, other requirements of these regulations. In particular the provisions of chapter 246-232 WAC apply to applications and licenses subject to this chapter.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-010, filed 11/30/79, effective 1/1/80. Formerly chapter 402-20 WAC.]

WAC 246-235-010 Filing application for specific licenses. (1) Applications for specific licenses shall be filed on department form RHF-1.

(2) The department may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the department to determine whether the application should be granted or denied or whether a license should be modified or revoked.

(3) Each application shall be signed by the applicant or licensee or a person duly authorized to act for and on the applicant's behalf.

(4) An application for a license may include a request for a license authorizing one or more activities.

(5) In the application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the department provided such references are clear and specific.

(6) Applications and documents submitted to the department may be made available for public inspection except that the department may withhold any document or part thereof from public inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-020, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-050.]

WAC 246-235-020 General requirements for the issuance of specific licenses. A license application will be approved if the department determines that:

(1) The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with these regulations in such a manner as to minimize danger to public health and safety or property;

(2) The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;

(3) The issuance of the license will not be inimical to the health and safety of the public; and

(4) The applicant satisfies any applicable special requirements in WAC 246-235-075 through 246-235-110, and chapters 246-239 through 246-252 WAC.

(5) In the case of an application for a license to receive and possess radioactive material for commercial waste disposal by land burial, source material milling, or for the conduct of any other activity which the agency determines will significantly affect the quality of the environment, the department, before commencement of construction of the plant or facility in which the activity will be conducted, has concluded, after independently weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess radioactive material in such plant or facility. As used in this paragraph the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-235-020, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-040, filed 12/11/86. Statutory Authority: Chapter 70.121 RCW, 81-16-031 (Order 1683), § 402-22-040, filed 7/28/81. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-040, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-060.]

WAC 246-235-030 Issuance of specific licenses. (1) Upon a determination that an application meets the requirements of the act and the regulations of the department the department will issue a specific license authorizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary.

(2) The department may incorporate in any license at the time of issuance, or thereafter by appropriate rule, regulation, or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use, storage, and transfer of radioactive material subject to this part as it deems appropriate or necessary in order to:

(a) Minimize danger to public health and safety or property;

(b) Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be appropriate or necessary; and

(c) Prevent loss or theft of material subject to this part.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW

(2003 Ed.)

70.98.080, 87-01-031 (Order 2450), § 402-22-045, filed 12/11/86; 79-12-073 (Order 1459), § 402-22-045, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-080.]

WAC 246-235-040 Expiration of licenses. Except as provided in WAC 246-235-050(2), each specific license shall expire at the end of the day, in the month and year stated therein.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-050, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-100.]

WAC 246-235-050 Renewal of license. (1) Applications for renewal of specific licenses shall be filed in accordance with WAC 246-235-010.

(2) In any case in which a licensee, not less than thirty days prior to expiration of the existing license, has filed an application in proper form for renewal or for a new license authorizing the same activities, such existing license shall not expire until the application has been finally determined by the department.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-055, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-110.]

WAC 246-235-055 Precedence of license condition over regulation. (1) A license condition may be used to specifically modify any regulation pertaining to the possession, use, storage, transfer, or disposal of radioactive material. Any license condition used to modify an existing regulation shall set forth the title, chapter, section, and, where applicable, any subsection and paragraph numbers for the regulation being modified, and fully define the nature and extent of the modification.

(2) In the event a regulation is changed, an existing license condition that is more restrictive than the new regulation remains in force until there is an amendment or renewal of the license that removes or modifies the license condition.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-235-055, filed 12/9/93, effective 1/9/94.]

WAC 246-235-060 Amendment of licenses at request of licensee. Applications for amendment of a license shall be filed in accordance with WAC 246-235-010 and shall specify the respects in which the licensee desires the license to be amended and the grounds for such amendment.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-22-060, filed 9/16/83; 79-12-073 (Order 1459), § 402-22-060, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-120.]

WAC 246-235-070 Agency action on applications to renew or amend. In considering an application by a licensee

[Title 246 WAC—p. 353]

to renew or amend the license, the department will apply the criteria set forth in this chapter, as applicable.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-065, filed 12/11/86; 79-12-073 (Order 1459), § 402-22-065, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-130.]

WAC 246-235-075 Financial assurance and record-keeping for decommissioning. (1) Each applicant for one of the following licenses shall submit a decommissioning funding plan as described in this section:

(a) A specific license authorizing receipt of radioactive waste for the purpose of volume reduction, repackaging or interim storage.

(b) Receipt of contaminated articles, scrap material, equipment, or clothing to be decontaminated at the licensee's facility.

(c) A specific license authorizing the possession and use of radioactive material of half-life greater than one hundred twenty days and in quantities for unsealed material exceeding 10^3 times and for sealed forms exceeding 10^{10} times the applicable quantities set forth in WAC 246-221-300 Appendix B (for a combination of isotopes the unity rule applies. A decommissioning funding plan will be required if R is greater than 1, where R is defined as the sum of the ratios of the quantity for sealed and unsealed forms of each isotope compared to the applicable value derived from WAC 246-221-300).

(d) A specific license authorizing possession and use of source material in readily dispersible form and in quantities greater than 10 millicuries.

(2) Each decommissioning funding plan shall contain:

(a) A cost estimate for decommissioning facilities impacted by the activities authorized in the specific license.

(b) A description of the method of assuring funds for decommissioning.

(c) A schedule for adjusting cost estimates and associated funding levels periodically over the life of the facility or facilities.

(d) A description of methods and general procedures for performing facility decontamination, maintaining security, and performing a final radiation survey.

(e) A commitment to clean up accidental spills promptly and to begin decommissioning of the facility or facilities within twelve months of ceasing operation involving radioactive material.

(3) Each cost estimate for decommissioning shall include:

(a) A description of the facility and areas within the facility likely to require decommissioning as a result of routine operation.

(b) Anticipated labor, equipment and material costs.

(c) Anticipated waste volume.

(d) Anticipated packaging, transportation and waste disposal costs.

(e) An assessment of costs associated with an accident involving licensed material.

(4) Each applicant shall submit a certification that financial assurance for decommissioning shall be provided by one or more of the following methods:

(a) Prepayment. Prepayment is the deposit of sufficient funds to pay decommissioning costs. Funds shall be deposited prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(b) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid should the licensee default. A surety method may be in the form of a surety bond, letter of credit, or line of credit. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance shall be open-ended or, if written for a specified term, such as five years, shall be renewed automatically unless ninety days or more prior to the renewal date, the issuer notifies the department, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance shall also require that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the department within thirty days after receipt of notification of cancellation.

(ii) The surety method or insurance shall be payable to a trust established for decommissioning costs. The trustee and trust shall be acceptable to the department. Acceptable trustees include an appropriate state or federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

(iii) The surety method or insurance must remain in effect until the department has terminated the license.

(c) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control. The total amount of funds in the external sinking fund shall be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provisions shall be as stated in subsection (4)(b) of this section.

(d) Statement of intent. In the case of state or local government licensees, a statement of intent containing a cost estimate for decommissioning and indicating that funds for decommissioning will be obtained when necessary.

(e) Other methods of financial assurance as approved by the department. The department may approve other financial mechanisms submitted by the applicant or licensee if the alternate method meets, at a minimum, the requirements of 10 C.F.R. 30.35 and associated U.S. Nuclear Regulatory Commission guidance.

(5)(a) The department shall review each decommissioning funding plan prior to license issuance and prior to license renewal.

(b) The applicant or licensee shall incorporate department comments into its cost estimate and shall revise its financial surety accordingly.

(c) Applicants shall obtain the appropriate financial assurance as approved by the department prior to receipt of licensed material. The department may issue a new license if the applicant agrees to comply with the decommissioning funding plan as approved. If the applicant defers execution of the financial instrument until after the license has been issued, a signed original of the financial instrument obtained to satisfy the requirements of this section shall be submitted to the department before receipt of licensed material.

(d) Holders of licenses issued on or before the effective date of this rule shall submit a decommissioning funding plan to the department by April 1, 1993. Licensees shall implement the financial assurance requirements within thirty days of receiving department approval of the decommissioning funding plan. Licensees shall submit copies of the financial surety within thirty days of securing the surety and annually thereafter.

(6) Each person licensed under this chapter shall keep records of information important to the safe and effective decommissioning of the facility in an identified location until the site is released for unrestricted use. Before licensed activities are transferred or assigned in accordance with WAC 246-232-050(2), licensees shall transfer all records described in this subsection to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated by the department. If records of relevant information are kept for other purposes, reference to these records and their locations may be used. Information the department considers important to decommissioning consists of:

(a) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records shall include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(b) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(c) Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after any leak) or depleted uranium used only for shielding or as penetrators in unused munitions, or radioactive materials having only half-lives of less than sixty-five

days, a list contained in a single document and updated every two years, of the following:

(i) All areas designated and formerly designated as restricted areas as defined under WAC 246-220-010;

(ii) All areas outside of restricted areas that require documentation under (a) of this subsection;

(iii) All areas outside of restricted areas where current and previous wastes have been buried as documented under WAC 246-221-230 (8)(a); and

(iv) All areas outside of restricted areas which contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in chapter 246-246 WAC or apply for approval for disposal under WAC 246-221-180. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-235-075, filed 3/15/00, effective 4/15/00; 99-15-105, § 246-235-075, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080, 97-08-095, § 246-235-075, filed 4/2/97, effective 5/3/97; 92-06-008 (Order 245), § 246-235-075, filed 2/21/92, effective 3/23/92.]

WAC 246-235-077 Special requirements for emergency planning. (1) Each application to possess radioactive materials in unsealed form, on foils or plated sources, or sealed in glass in excess of the quantities in WAC 246-235-150, "Schedule C—Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release," must contain either:

(a) An evaluation showing that the maximum dose to a member of the public offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid or an intake of 2 milligrams of soluble uranium; or

(b) An emergency plan for responding to the radiological hazards of an accidental release of radioactive material and to the chemical hazards associated with uranium hexafluoride, when present.

(2) One or more of the following factors may be used to support an evaluation submitted under subsection (1)(a) of this section:

(a) The radioactive material is physically separated so that only a portion could be involved in an accident;

(b) All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;

(c) The release fraction in the respirable size range would be lower than the release fraction listed in WAC 246-235-150 Schedule C due to the chemical or physical form of the material;

(d) The solubility of the radioactive material would reduce the dose received;

(e) Facility design or engineered safety features in the facility would cause the release fraction to be lower than listed in WAC 246-235-150 Schedule C;

(f) Operating restrictions or procedures would prevent a release fraction as large as that listed in WAC 246-235-150 Schedule C; or

(g) Other factors appropriate for the specific facility.

(3) An emergency plan for responding to a release of radioactive material submitted under subsection (1)(b) of this section must include the following information:

(a) Facility description. A brief description of the licensee's facility and area near the site.

(b) Types of accidents. An identification of each type of radioactive materials accident for which protective actions may be needed.

(c) Classification of accidents. A system for classifying accidents as alerts or site area emergencies.

(d) Detection of accidents. Identification of the means of detecting each type of accident in a timely manner.

(e) Mitigation of consequences. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(f) Assessment of releases. A brief description of the methods and equipment to assess releases of radioactive materials.

(g) Responsibilities. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the department; also responsibilities for developing, maintaining, and updating the plan.

(h) Notification and coordination. A commitment, and a brief description of the means available, promptly to notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the department immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency. These reporting requirements do not supersede or release licensees from complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499 or other state or federal reporting requirements.

(i) Information to be communicated. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to offsite response organizations and to the department.

(j) Training. A brief description of the frequency, performance objectives and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

(k) Safe shutdown. A brief description of the means of restoring the facility to a safe condition after an accident.

(l) Exercises. Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises although recommended is not required. Exercises must use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(m) Hazardous chemicals. A certification that the licensee or applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, if applicable to the licensee's or applicant's activities at the proposed place of use of the radioactive material.

(4) The licensee shall allow the offsite response organizations expected to respond in case of an accident sixty days to comment on the licensee's emergency plan before submitting it to the department. The licensee shall provide any comments received within the sixty days to the department with the emergency plan.

[Statutory Authority: RCW 70.98.050, 95-01-108, § 246-235-077, filed 12/21/94, effective 1/21/95.]

WAC 246-235-080 Special requirements for issuance of specific licenses for medical use of radioactive material.

(1) *Human use of radioactive material in institutions.* In addition to the requirements set forth in WAC 246-235-020 a specific license for human use of radioactive material in institutions will be issued if:

(a) The applicant has appointed a radiation safety committee to coordinate the use of radioactive material throughout that institution and to maintain surveillance over the institution's radiation safety program. Membership of the committee should include a specialist (where applicable a physician) from each department where radioactive material is used, a representative of the institution's management, a representative of the nursing staff, and a person trained in radiation safety. The radiation safety committee shall meet at least quarterly. Minutes shall be taken and maintained for two years for inspection by the department;

(b) The applicant possesses adequate facilities for the clinical care of patients. The applicant is advised that construction of new radioisotope facilities and modification of existing facilities must also comply with the requirements of WAC 246-318-660 of the construction review section of the department;

(c) The physician(s) designated on the application as the individual user(s) has (or have) substantial experience in the

handling and administration of radioactive material and, where applicable, the clinical management of radioactive patients; and

(d) If the application is for a license to use unspecified quantities or multiple types of radioactive material, the applicant's staff has substantial experience in the use of a variety of radioactive materials for a variety of human uses.

(2) *Licensing of individual physicians for human use of radioactive material.* In addition to the requirements set forth in WAC 246-235-020 a specific license for the human use of radioactive material will be issued to an individual physician if:

(a) The applicant has access to a hospital possessing adequate facilities to hospitalize and monitor the applicant's radioactive patients whenever it is advisable;

(b) The applicant has extensive experience in the handling and administration of radioactive material and, where applicable, the clinical management of radioactive patients;

(c) The application is for use in the applicant's practice in an office outside a medical institution; and

(d) If the application is for use by an individual physician or group of physicians for a specific license to receive, possess or use radioactive material on the premises of a medical institution, the department will issue a specific license only if:

(i) The use of radioactive material is limited to the:

(A) Administration of radiopharmaceuticals for diagnostic or therapeutic purposes;

(B) Performance of diagnostic studies on patients to whom a radiopharmaceutical has been administered;

(C) Performance of in vitro diagnostic studies; or

(D) Calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation and diagnostic instrumentation;

(ii) The physician brings the radioactive material with him or her and removes the radioactive material when he or she departs. (The institution cannot receive, possess or store radioactive material other than the amount of material remaining in the patient); and

(iii) The medical institution does not hold a radioactive material license issued pursuant to the provisions of subsection (1) of this section.

(3) *Specific licenses for certain groups of medical uses of radioactive material.*

(a) Subject to the provisions of (b), (c) and (d) of this subsection an application for a specific license pursuant to subsection (1), (2) or (4) of this section, or for any medical use or uses of radioactive material specified in one or more of Groups I to VI, inclusive, of WAC 246-235-120, Schedule A, will be approved for all of the uses within the group or groups which include the use or uses specified in the application if:

(i) The applicant satisfies the requirements of subsection (1), (2) or (4) of this section;

(ii) The applicant, or the physician designated in the application as the individual user, has adequate clinical experience in the types of uses included in the group or groups;

(iii) The applicant, or the physicians and all other personnel who will be involved in the preparation and use of the radioactive material, have adequate training and experience

in the handling of radioactive material appropriate to their participation in the uses included in the group or groups;

(iv) The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the uses included in the group or groups, specifically:

(A) For Groups I through V, applicant must possess and use a calibrated and operable low-range survey instrument with a thin window (less than 7 mg/cm²) capable of detecting radiation levels of 0.05 milliroentgen per hour up to at least 20 milliroentgens per hour;

(B) For Groups III, V, and VI, applicant must possess a calibrated and operable high-range survey instrument capable of detecting radiation levels up to at least one Roentgen per hour;

(v) The applicant's radiation safety operating procedures are adequate for handling and disposal of the radioactive material involved in the uses included in the group or groups.

(b) Any licensee or registrant who is authorized to use radioactive material pursuant to one or more groups in (a) of this subsection and WAC 246-235-120, Schedule A, is subject to the following conditions:

(i) For Groups I, II, IV, and V, no licensee or registrant shall receive, possess or use radioactive material except as a radiopharmaceutical manufactured in the form to be administered to the patient, labeled, packaged and distributed in accordance with a specific license issued by the department pursuant to WAC 246-235-100, a specific license issued by the United States Nuclear Regulatory Commission pursuant to Section 32.72 of 10 CFR Part 32, or a specific license issued by an agreement state or a licensing state pursuant to equivalent regulations.

(ii) For Group III, no licensee or registrant shall receive, possess or use generators or reagent kits containing radioactive material unless manufactured, labeled, packaged and distributed in accordance with a specific license issued by the department pursuant to WAC 246-235-100, a specific license issued by the United States Nuclear Regulatory Commission under Section 32.73 of 10 CFR Part 32, or a specific license issued by an agreement state or a licensing state under equivalent regulations.

(iii) For Group VI, no licensee or registrant shall receive, possess or use radioactive material except as contained in a source or device that has been manufactured, labeled, packaged and distributed in accordance with a specific license issued by the department under WAC 246-235-102, a specific license issued by the United States Nuclear Regulatory Commission under Section 32.74 of 10 CFR Part 32, or a specific license issued to the manufacturer by an agreement state or a licensing state under equivalent regulations.

(iv) For Group III, any licensee or registrant who uses generators or reagent kits shall elute the generator or process radioactive material with the reagent kit in accordance with instructions approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and are furnished by the manufacturer on the label attached to or in the leaflet or brochure which accompanies the generator or reagent kit.

(c) Any licensee who is licensed under (a) of this subsection for one or more of the medical use groups in WAC 246-

235-120, Schedule A, also is authorized, subject to the provisions of (c) and (d) of this subsection to receive, possess and use for calibration and reference standards:

(i) Any radioactive material authorized for use under Group I, Group II, or Group III of WAC 246-235-120, Schedule A, with a half-life not longer than one hundred days, in amounts not to exceed 15 millicuries total;

(ii) Any radioactive material authorized for use under Group I, Group II, or Group III of WAC 246-235-120, Schedule A, with half-life greater than one hundred days in amounts not to exceed 200 microcuries total;

(iii) Technetium-99m in amounts not to exceed 50 millicuries;

(iv) Any radioactive material excluding Radium-226, in amounts not to exceed fifteen millicuries per sealed source, contained in calibration or reference sources that have been manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the department pursuant to WAC 246-235-102, a specific license issued by the United States Nuclear Regulatory Commission pursuant to Section 32.74 of 10 CFR Part 32, or a specific license issued to the manufacturer by an agreement state or a licensing state pursuant to equivalent regulations.

(d) Leak tests.

(i) Any licensee or registrant who possesses sealed sources as calibration or reference sources under (c) of this subsection shall cause each sealed source containing radioactive material, other than Hydrogen-3, with a half-life greater than thirty days in any form other than gas to be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed sources shall not be used until tested. However, leak tests are not required when:

(A) The source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material;

(B) The sealed source is stored and is not being used: Provided, a physical inventory of the source and wipe surveys of the storage area or storage container are conducted.

(ii) The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is mounted or stored on which contamination might be expected to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the department.

(iii) If the leak test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee or registrant shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with chapters 246-235 and 246-221 WAC. A report shall be filed within five days of the test with the department describing the equipment involved, the test results, and the corrective action taken.

(e) Any licensee or registrant who possesses and uses calibration and reference sources under (c)(iv) of this subsection shall:

(i) Follow the radiation safety and handling instructions approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and furnished by the manufacturer on the label attached to the source, or permanent container thereof, or in the leaflet or brochure that accompanies the source, and maintain the instructions in a legible and conveniently available form; and

(ii) Conduct a quarterly physical inventory to account for all sources received and possessed. Records of the inventories shall be maintained for inspection by the department and shall include at a minimum the quantities and kinds of radioactive material, location of sources, name of person performing the inventory, and the date of the inventory.

(4) *Human use of sealed sources.* In addition to the requirements set forth in WAC 246-235-020, a specific license for human use of sealed sources will be issued only if the individual applicant or, if the application is made by an institution, the individual user:

(a) Has specialized training in the diagnostic or therapeutic use of the sealed source considered, or has experience equivalent to such training; and

(b) Is a physician.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-235-080, filed 3/24/00, effective 4/24/00; 98-13-037, § 246-235-080, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-22-070, filed 12/11/86; 83-19-050 (Order 2026), § 402-22-070, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-22-070, filed 12/8/80. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-070, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-070.]

WAC 246-235-084 Special requirements for issuance of specific licenses for industrial radiography. In addition to the requirements set forth in WAC 246-235-020, a specific license for use of sealed sources in industrial radiography will be issued if:

(1) The applicant submits an adequate program for training radiographers and radiographer's assistants that meets the requirements of WAC 246-243-050 and 246-243-130.

(a) After June 30, 2000, a license applicant need not describe its initial training and examination program for radiographers in the subjects outlined in WAC 246-243-230.

(b) From June 30, 2000, to January 1, 2001, a license applicant may affirm that all individuals acting as industrial radiographers will be certified in radiation safety by a certifying entity before beginning duty as radiographers. This affirmation substitutes for a description of its initial training and examination program for radiographers in the subjects outlined in WAC 246-243-230.

(2) The applicant submits procedures for verifying and documenting the certification status of radiographers and for ensuring that the certification of individuals acting as radiographers remains valid.

(3) The applicant submits written operating and emergency procedures as described in WAC 246-243-140.

(4) The applicant submits a description of a program for inspections of the job performance of each radiographer and radiographers' assistant at intervals not to exceed six months as described in WAC 246-243-050.

(5) The applicant submits a description of the applicant's overall organizational structure as it applies to the radiation safety responsibilities in industrial radiography, including specified delegation of authority and responsibility.

(6) The applicant identifies and lists the qualifications of the individual(s) designated as the RSO (WAC 246-243-047) and potential designees responsible for ensuring that the licensee's radiation safety program is implemented in accordance with approved procedures.

(7) If an applicant intends to perform leak testing of sealed sources or of exposure devices containing depleted uranium (DU) shielding, the applicant shall describe the procedures for performing and the qualifications of the person(s) authorized to do the leak testing. If the applicant intends to analyze its own wipe samples, the application must include a description of the procedures to be followed. The description must include the:

- (a) Instruments to be used;
- (b) Methods of performing the analysis; and
- (c) Pertinent experience of the person who will analyze the wipe samples.

(8) If the applicant intends to perform "in-house" calibrations of survey instruments, the applicant must describe methods to be used and the relevant experience of the person(s) who will perform the calibrations. All calibrations must be performed according to these procedures and the intervals prescribed in WAC 246-243-080.

(9) The applicant identifies and describes the location(s) of all field stations and permanent radiographic installations.

(10) The applicant identifies the location where all records required by this section and other sections of these regulations will be maintained.

[Statutory Authority: RCW 70.98.050, 00-08-013, § 246-235-084, filed 3/24/00, effective 4/24/00.]

WAC 246-235-086 Special requirements for environmentally significant licensing actions. In addition to the requirements set forth in WAC 246-235-020, a specific license for any activity within the licensing authority of the department which the department determines will significantly affect the radiological quality of the human environment, including those specified in WAC 197-11-845(1) and 246-03-030 (1)(a)(ii) (i.e., licenses to operate low level waste burial facilities or licenses to operate or expand beyond the design capacity, mineral processing facilities or their tailings areas, whose products, or byproducts, have concentrations of naturally occurring radioactive material in excess of exempt concentrations as specified in WAC 246-232-130, Schedule C), will be issued if the following conditions are met:

(1) Environmental impact statement.

(a) The application for a license or license amendment (other than administrative amendments) is accompanied or preceded by a final environmental impact statement or final declaration of nonsignificance completed in accordance with the State Environmental Policy Act (SEPA) procedures and guidelines specified in chapters 197-11 and 246-03 WAC. For any uranium or thorium mill in operation on or before the effective date of this regulation for which an environmental impact statement has not been prepared previously, an application for license renewal must be accompanied or preceded

(2003 Ed.)

by a final environmental impact statement or final declaration of nonsignificance completed in accordance with SEPA guidelines.

Note: No construction shall be commenced until the license has been issued or unless an emergency exemption from SEPA requirements is granted in accordance with WAC 197-11-880. For the purposes of this subsection, the term "commencement of construction" means any clearing of land, excavation or other substantial action related to a proposed activity for specific licensing that would adversely affect the natural environment of a site; this term does not include changes desirable for the temporary use of the land for public recreational use, limited borings to determine site characteristics as necessary for environmental assessment, or other preconstruction monitoring to establish background information related to suitability of a site or to the protection of environmental values. In the case where an exemption is granted, the applicant shall assume all financial risk for construction activity; waive any claim of entitlement to the issuance of a license based solely upon the grant of the exemption or the commencement of construction pursuant thereto; and furnish, if the circumstances warrant and the department so requires, a financial surety arrangement to insure the protection of the public health, safety and the environment in the event of abandonment, default, or inability of the license applicant to meet the requirements of the act or these regulations.

(b) In addition to the information required in chapter 197-11 WAC, the following additional areas shall be addressed in the final environmental impact statement:

(i) Alternative sites to those chosen by the applicant shall include all alternative sites, whether or not those sites are under the control or ownership of the applicant.

(ii) Long term impacts shall include, but not be limited to, decommissioning, decontamination, reclamation impacts and material management associated with the proposed activities.

(iii) Environmental reviews, dose assessments, ecology, construction effects on biota, impact on the environment from the use of chemicals, and socioeconomic effects shall be addressed.

(iv) Alternative disposal sites and techniques for disposal shall be evaluated to determine if a site or technique is clearly superior.

(2) For uranium or thorium milling operations, a bond made payable to the department of health or other acceptable government agency, and in an amount specified by the department, shall be posted to ensure the protection of the public health and safety in the event of abandonment, default or other inability of the licensee to meet the requirements for reclamation and disposal of tailings and for decommissioning the site. The bond, or a copy thereof when the bond is made payable to another government agency, shall be received by the department prior to issuance of the license, or prior to license renewal for mills in operation on or before the effective date of this regulation. Other acceptable surety arrangements in addition to surety bonding include cash deposits, certificates of deposit, deposits of government securities, letters or lines of credit or combinations of the foregoing. The amount and mechanism of the surety arrangement may be reviewed by the department preceding each license renewal and adjustments may be required of the licensee prior to such renewal.

(3) The owner of the proposed uranium or thorium mill and tailings site(s) agrees to transfer or revert to the appropriate state or federal agency upon termination of the license, all lands, buildings and grounds, and any interest therein, neces-

[Title 246 WAC—p. 359]

sary to fulfill the purposes of this subsection, except where the lands are held in trust for, or are owned by, any Indian tribe. For any uranium or thorium mill in operation on or before the effective date of this regulation, such an agreement will be required prior to license renewal.

(4) For all uranium and thorium milling operations, the owner or operator shall arrange to pay to the department or its designee a fee in accordance with WAC 246-254-150 for a special security fund for the further maintenance, surveillance or care which may be required after a licensee has ceased to operate.

A minimum fund of two hundred fifty thousand dollars shall be provided by the licensee payable to the state. If a shortfall exists between the amount of money in the special security fund and the two hundred fifty thousand dollars minimum amount, a surety bond, or other acceptable surety instrument as defined above shall be arranged.

(5) The application for a license includes a description of an appropriate program for effluent monitoring, environmental monitoring and data reporting. The description shall encompass locations, frequency, and types of sampling, analytical plans and procedures, minimum detection levels, sampling equipment and quality assurance programs.

(6) All licensees or registrants required to meet the additional requirements set forth in this subsection shall establish environmental monitoring programs adequate to determine the impact of their activity on the natural environment around the site of their environmentally significant activity. The established environmental and effluent monitoring program shall address all environmentally significant radionuclide releases and external radiation sources caused or threatened to be caused by the licensee's activities.

(a) Effluent and environmental monitoring results shall include the following minimum information as pertinent:

(i) Information as to flow rates, total volume of effluent, peak concentration, concentration of each radionuclide in the effluent averaged over a period of one year at the point where the effluent leaves a stack, tube, pipe, or similar conduit;

(ii) A description of the properties of the effluents, including:

(A) Chemical composition;

(B) Physical characteristics, including suspended solids content in liquid effluents, and nature of gas aerosol for air effluents;

(C) The hydrogen ion concentrations (pH) of liquid effluents; and

(D) The size range of particulates in effluent released into air;

(iii) A description of the anticipated human occupancy in the unrestricted area where the highest concentration of radioactive material from the effluent is expected, and, in the case of a river or stream, a description of water uses downstream from the point of release of the effluent.

(iv) Information as to the highest concentration of each radionuclide in an unrestricted area, including anticipated concentrations averaged over a period of one year:

(A) In air at any point of human occupancy; or

(B) In water at points of use downstream from the point of release of the effluent;

(v) The background concentration of radionuclides in the receiving river or stream prior to the release of liquid effluent;

(vi) A description of the waste treatment facilities and procedures used to reduce the concentration of radionuclides in effluents prior to their release;

(vii) A written description of sampling techniques and sample analysis methods;

(viii) A written description of how all calculated results were obtained from sample analysis data. This explanation shall include example calculations and estimates of the precision and sensitivity of monitoring results;

(ix) A written description of the licensee's quality control program including specification of control samples and standard samples used.

(b) The licensee shall submit in writing to the department within sixty days after January 1 and July 1 of each year, reports specifying the quantities of each of the principle radionuclides released to unrestricted areas in liquid and in gaseous effluent during the previous six months of operations. This data shall be reported in a manner that will permit the department to confirm the potential annual radiation doses to the public. All data from the radiological and nonradiological environmental monitoring program will also be submitted for the same time period and frequency as specified above. The data shall be reported in a manner which will allow the department to confirm the potential annual radiation doses to the public.

(7) For land disposal of radioactive material, the provisions of chapter 246-250 WAC must also be met.

(8) For operation of mineral processing facilities, the provisions of chapter 246-252 WAC must also be met.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-235-086, filed 3/24/00, effective 4/24/00.]

WAC 246-235-090 Special requirements for specific licenses of broad scope. This section prescribes requirements for the issuance of specific licenses of broad scope for radioactive material ("broad licenses") and certain regulations governing holders of such licenses.*

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity or other product containing source material or byproduct material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(1) *The different types of broad licenses are set forth below:*

(a) A "Type A specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of the radioactive material specified in the license, but not exceeding quantities specified in the license, for any authorized purpose. The quantities specified are usually in the millicurie range.

(b) A "Type B specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in WAC 246-235-140 Schedule B, for any authorized purpose. The possession limit for a

Type B broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in WAC 246-235-140 Schedule B, Column I. If two or more radionuclides are possessed thereunder, the possession limit for each is determined as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in WAC 246-235-140 Schedule B, Column I, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(c) A "Type C specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in WAC 246-235-140 Schedule B, for any authorized purpose. The possession limit for a Type C broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in WAC 246-235-140 Schedule B, Column II. If two or more radionuclides are possessed thereunder, the possession limit is determined for each as follows: For each radionuclide determine the ratio of the quantity possessed to the applicable quantity specified in WAC 246-235-140 Schedule B, Column II, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(2) *An application for a Type A specific license of broad scope will be approved if:*

(a) The applicant satisfies the general requirements specified in WAC 246-235-020.

(b) The applicant has engaged in a reasonable number of activities involving the use of radioactive material; and

(c) The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(i) The establishment of a radiation safety committee composed of such persons as a radiation safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive material;

(ii) The appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and

(iii) The establishment of appropriate administrative procedures to assure:

(A) Control of procurement and use of radioactive material;

(B) Completion of safety evaluation of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(C) Review, approval, and recording by the radiation safety committee of safety evaluation of proposed uses prepared in accordance with item (2)(c)(iii)(B) of this section prior to use of the radioactive material.

(3) *An application for a Type B specific license of broad scope will be approved if:*

(a) The applicant satisfies the general requirements specified in WAC 246-235-020; and

(b) The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(i) The appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and

(ii) The establishment of appropriate administrative procedures to assure:

(A) Control of procurement and use of radioactive material;

(B) Completion of safety evaluations of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(C) Review, approval, and recording by the radiation safety officer of safety evaluations of proposed uses prepared in accordance with item (3)(b)(ii)(B) of this section prior to use of the radioactive material.

(4) *An application for a Type C specific license of broad scope will be approved if:*

(a) The applicant satisfies the general requirements specified in WAC 246-235-020.

(b) The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of individuals, who have received:

(i) A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering; and

(ii) At least forty hours of training and experience in the safe handling of radioactive material, and in the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and

(c) The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, recordkeeping, material control and accounting, and management review necessary to assure safe operations.

(5) *Specific licenses of broad scope are subject to the following conditions:*

(a) Unless specifically authorized by the department, persons licensed under this section shall not:

(i) Conduct tracer studies in the environment involving direct release of radioactive material;

(ii) Receive, acquire, own, possess, use or transfer devices containing 100,000 curies or more of radioactive material in sealed sources used for irradiation of materials;

(iii) Conduct activities for which a specific license issued by the department under WAC 246-235-080 through 246-235-086 or WAC 246-235-091 through 246-235-105 is required; or

(iv) Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug or other product designed for ingestion or inhalation by, or application to, a human being.

(b) Each Type A specific license of broad scope issued under this part shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety committee.

(c) Each Type B specific license of broad scope issued under this part shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety officer.

(d) Each Type C specific license of broad scope issued under this part shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals who satisfy the requirements of subsection (4) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-235-090, filed 3/24/00, effective 4/24/00; 98-13-037, § 246-235-090, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-090, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-073.]

WAC 246-235-091 Manufacture and distribution of industrial products containing depleted uranium under general license.

(1) An application for a specific license to manufacture industrial products and devices containing depleted uranium for use pursuant to WAC 246-233-010(4) or equivalent regulations of the United States Nuclear Regulatory Commission or an agreement state will be approved if:

(a) The applicant satisfies the general requirements specified in WAC 246-235-020;

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses and potential hazards of the industrial product or device to provide reasonable assurance that possession, use or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in one year a radiation dose in excess of ten percent of the limits specified in WAC 246-221-010(1); and

(c) The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass-volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.

(2) In the case of an industrial product or device whose unique benefits are questionable, the department will approve an application for a specific license under this section only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

(3) The department may deny any application for a specific license under this section if the end use(s) of the industrial product or device cannot be reasonably foreseen.

(4) Each person licensed pursuant to subsection (1) of this section shall:

(a) Maintain the level of quality control required by the license in the manufacture of the industrial product or device, and in the installation of the depleted uranium into the product or device;

(b) Label or mark each unit to:

(i) Identify the manufacturer of the product or device and the number of the license under which the product or device was manufactured, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and

(ii) State that the receipt, possession, use and transfer of the product or device are subject to a general license or the equivalent and the regulations of the United States Nuclear Regulatory Commission or of an agreement state;

(c) Assure that the depleted uranium before being installed in each product or device has been impressed with the following legend clearly legible through any plating or other covering: "Depleted uranium";

(d) Furnish to each person to whom depleted uranium in a product or device is transferred for use pursuant to the general license contained in WAC 246-233-010(4) or its equivalent:

(i) A copy of the general license contained in WAC 246-233-010(4) and a copy of department Form RHF-20; or

(ii) A copy of the general license contained in the United States Nuclear Regulatory Commission's or agreement state's regulation equivalent to WAC 246-233-010(4) and a copy of the United States Nuclear Regulatory Commission's or agreement state's certificate, or alternatively, furnish a copy of the general license contained in WAC 246-233-010(4) and a copy of department Form RHF-20 with a note explaining that use of the product or device is regulated by the United States Nuclear Regulatory Commission or an agreement state under requirements substantially the same as those in WAC 246-233-010(4).

(e) Report to the department all transfers of industrial products or devices to persons for use under the general license in WAC 246-233-010(4). Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within thirty days after the end of each calendar quarter in which such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under chapter 246-233 WAC during the reporting period, the report shall so indicate;

(f) Provide certain other reports as follows:

(i) Report to the United States Nuclear Regulatory Commission all transfers of industrial products or devices to persons for use under the United States Nuclear Regulatory Commission general license in Section 40.25 of 10 CFR Part 40;

(ii) Report to the responsible department all transfers of devices manufactured and distributed pursuant to this section for use under a general license in that state's regulations equivalent to WAC 246-233-010(4);

(iii) Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within thirty days after the end of each calendar quarter in which such product or device is transferred to the generally licensed person;

(iv) If no transfers have been made to United States Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the United States Nuclear Regulatory Commission;

(v) If no transfers have been made to general licensees within a particular agreement state during the reporting period, this information shall be reported to the responsible department; and

(g) Keep records showing the name, address and point of contact for each general licensee to whom the person transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in WAC 246-233-010(4) or equivalent regulations of the United States Nuclear Regulatory Commission or of an agreement state. The records shall be maintained for a period of two years and shall show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the report requirements of this section.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-235-091, filed 6/8/98, effective 7/9/98.]

WAC 246-235-093 Manufacture, assembly or distribution of devices under general license. (1) An application for a specific license to manufacture or distribute devices containing radioactive material, excluding special nuclear material, to persons generally licensed under WAC 246-233-020(4) or equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state will be approved if:

(a) The applicant satisfies the general requirements of WAC 246-235-020;

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:

(i) The device can be safely operated by persons not having training in radiological protection;

(ii) Under ordinary conditions of handling, storage and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in one year a dose in excess of ten percent of the limits specified in the table in WAC 246-221-010(1); and

(iii) Under accident conditions (such as fire and explosion) associated with handling, storage and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:

Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye	15 rems
Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter	200 rems
Other organs	50 rems

(c) Each device bears a durable, legible, clearly visible label or labels approved by the department, which contain in a clearly identified and separate statement:

(i) Instructions and precautions necessary to assure safe installation, operation and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);

(ii) The requirement, or lack of requirement, for leak testing, or for testing any on-off mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and

(iii) The information called for in one of the following statements, as appropriate, in the same or substantially similar form:

(A) The receipt, possession, use and transfer of this device, Model , Serial No. Note*, are subject to a general license or the equivalent, and the regulations of the United States Nuclear Regulatory Commission or a state with which the United States Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

.....
(Name of manufacturer or distributor)*

(B) The receipt, possession, use and transfer of this device, Model , Serial No. Note*, are subject to a general license or the equivalent, and the regulations of a licensing state. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

.....
(Name of manufacturer or distributor)*

*Note: The model, serial number, and name of the manufacturer or distributor may be omitted from this label provided the information is elsewhere specified in labeling affixed to the device.

(2) In the event the applicant desires that the device be required to be tested at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, the applicant shall include in the application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the device or similar devices and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on-off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the department

will consider information which includes, but is not limited to:

- (a) Primary containment (source capsule);
- (b) Protection of primary containment;
- (c) Method of sealing containment;
- (d) Containment construction materials;
- (e) Form of contained radioactive material;
- (f) Maximum temperature withstood during prototype tests;

tests;

- (g) Maximum pressure withstood during prototype tests;
- (h) Maximum quantity of contained radioactive material;
- (i) Radiotoxicity of contained radioactive material; and
- (j) Operating experience with identical devices or similarly designed and constructed devices.

(3) In the event the applicant desires that the general licensee under WAC 246-233-020(4), or under equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the applicant shall include in the application written instructions to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities, and bases for such estimates. The submitted information shall demonstrate that performance of such activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive in one year a radiation dose in excess of ten percent of the limits specified in the table in WAC 246-221-010(1).

(4) Each person licensed under subsection (1) of this section to distribute devices to generally licensed persons shall:

(a) Furnish a copy of the general license contained in WAC 246-233-020(4) to each person to whom the person directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license contained in WAC 246-233-020(4);

(b) Furnish a copy of the general license contained in the United States Nuclear Regulatory Commission's, agreement state's, or licensing state's regulation equivalent to WAC 246-233-020(4), or alternatively, furnish a copy of the general license contained in WAC 246-233-020(4) to each person to whom, directly or through an intermediate person, is transferred radioactive material in a device for use pursuant to the general license of the United States Nuclear Regulatory Commission, the agreement state or the licensing state. If a copy of the general license in WAC 246-233-020(4) is furnished to such a person, it shall be accompanied by a note explaining that the use of the device is regulated by the United States Nuclear Regulatory Commission, agreement state or licensing state under requirements substantially the same as those in WAC 246-233-020(4);

(c) Report to the department all transfers of such devices to persons for use under the general license in WAC 246-233-020(4). Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model number of

device transferred, and the quantity and type of radioactive material contained in the device. If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include identification of each intermediate person by name, address, contact, and relationship to the intended user. If no transfers have been made to persons generally licensed under WAC 246-233-020(4) during the reporting period, the report shall so indicate. The report shall cover each calendar quarter and shall be filed within thirty days thereafter.

(d) Reports to other departments.

(i) Report to the United States Nuclear Regulatory Commission all transfers of such devices to persons for use under the United States Nuclear Regulatory Commission general license in Section 31.5 of 10 CFR Part 31.

(ii) Report to the responsible department all transfers of devices manufactured and distributed pursuant to this section for use under a general license in that state's regulations equivalent to WAC 246-233-020(4).

(iii) Such reports shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model of the device transferred, and the quantity and type of radioactive material contained in the device. If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include identification of each intermediate person by name, address, contact, and relationship to the intended user. The report shall be submitted within thirty days after the end of each calendar quarter in which such a device is transferred to the generally licensed person.

(iv) If no transfers have been made to United States Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the United States Nuclear Regulatory Commission.

(v) If no transfers have been made to general licensees within a particular state during the reporting period, this information shall be reported to the responsible department upon request of the department.

(e) Keep records showing the name, address and the point of contact for each general licensee to whom the person directly or through an intermediate person transfers radioactive material in devices for use pursuant to the general license provided in WAC 246-233-020(4), or equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state. The records shall show the date of each transfer, the radionuclide and the quantity of radioactivity in each device transferred, the identity of any intermediate person, and compliance with the report requirements of subsection (4) of this section.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-093, filed 6/8/98, effective 7/9/98.]

WAC 246-235-095 Manufacture, assembly, or distribution of luminous safety devices, certain calibration sources or ice detectors under general license. (1) *Special requirements for the manufacture, assembly or repair of luminous safety devices for use in aircraft.* An application for a specific license to manufacture, assemble or repair lumi-

nous safety devices containing tritium or promethium-147 for use in aircraft for distribution to persons generally licensed under WAC 246-233-020(5) will be approved subject to the following conditions:

(a) The applicant satisfies the general requirements specified in WAC 246-235-020; and

(b) The applicant satisfies the requirements of Sections 32.53, 32.54, 32.55, 32.56, 32.101 of 10 CFR Part 32 or their equivalent.

(2) *Special requirements for license to manufacture calibration sources containing americium-241, plutonium or radium-226 for distribution to persons generally licensed under WAC 246-233-020(7).* An application for a specific license to manufacture calibration and reference sources containing americium-241, plutonium or radium-226 to persons generally licensed under WAC 246-233-020(7) will be approved subject to the following conditions:

(a) The applicant satisfies the general requirement of WAC 246-235-020; and

(b) The applicant satisfies the requirements of Sections 32.57, 32.58, 32.59, 32.102 of 10 CFR Part 32 and Section 70.39 of 10 CFR Part 70 or their equivalent.

(3) *Licensing the manufacture and distribution of ice detection devices.* An application for a specific license to manufacture and distribute ice detection devices to persons generally licensed under WAC 246-233-020(9) will be approved subject to the following conditions:

(a) The applicant satisfies the general requirements of WAC 246-235-020; and

(b) The criteria of Sections 32.61, 32.62, 32.103 of 10 CFR Part 32 are met.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-095, filed 6/8/98, effective 7/9/98.]

WAC 246-235-097 Manufacture and distribution of radioactive material for certain in vitro clinical or laboratory testing under general license. An application for a specific license to manufacture or distribute radioactive material for use under the general license of WAC 246-233-020(8) will be approved if:

(1) The applicant satisfies the general requirements specified in WAC 246-235-020;

(2) The radioactive material is to be prepared for distribution in prepackaged units of:

(a) Iodine-125 in units not exceeding 10 microcuries each;

(b) Iodine-131 in units not exceeding 10 microcuries each;

(c) Carbon-14 in units not exceeding 10 microcuries each;

(d) Hydrogen-3 (tritium) in units not exceeding 50 microcuries each;

(e) Iron-59 in units not exceeding 20 microcuries each;

(f) Cobalt-57 in units not exceeding 10 microcuries each;

(g) Selenium-75 in units not exceeding 10 microcuries each;

(h) Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each.

(2003 Ed.)

(3) Each prepackaged unit bears a durable, clearly visible label:

(a) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 10 microcuries of iodine-125, iodine-131, carbon-14, cobalt-57, or selenium-75; 50 microcuries of hydrogen-3 (tritium); 20 microcuries of iron-59; or Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each; and

(b) Displaying the radiation caution symbol described in WAC 246-221-120 (1)(a) and the words, "CAUTION, RADIOACTIVE MATERIAL," and "Not for internal or external use in humans or animals."

(4) One of the following statements, as appropriate, or a substantially similar statement which contains the information called for in one of the following statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

(a) This radioactive material may be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of the United States Nuclear Regulatory Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority.

.....
Name of manufacturer

(b) This radioactive material may be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a licensing state.

.....
Name of manufacturer

(5) The label affixed to the unit, or the leaflet or brochure which accompanies the package, contains adequate information as to the precautions to be observed in handling and storing such radioactive material. In the case of the Mock Iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in WAC 246-221-170 of these regulations.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-097, filed 6/8/98, effective 7/9/98.]

WAC 246-235-100 Manufacture, preparation, or commercial transfer of radiopharmaceuticals for medical use. (1) An application for a specific license to manufacture and, prepare, or transfer for commercial distribution radiopharmaceuticals containing radioactive material for use by

persons licensed pursuant to WAC 246-235-080 (1), (2), or (3) for medical use in humans will be approved if:

(a) The applicant satisfies the general requirements specified in WAC 246-235-020 of this part;

(b) The applicant submits evidence that:

(i) The applicant is registered or licensed with the U.S. Food and Drug Administration (FDA) as a drug manufacturer; or

(ii) The applicant is licensed as a nuclear pharmacy by the state board of pharmacy;

(c) The applicant submits information on the radionuclide, chemical and physical form, maximum activity per vial, syringe, generator, or other container of the radiopharmaceutical, and shielding provided by the packaging of the radioactive material which is appropriate for safe handling and storage of radiopharmaceuticals by medical use licensees; and

(d) The applicant satisfies the labeling requirements specified by the state board of pharmacy in WAC 246-903-020. For a drug manufacturer, the labels required by this subsection are in addition to the labeling required by the Food and Drug Administration (FDA) and may be separate from or, with the approval of FDA, may be combined with the labeling required by FDA.

(2) A nuclear pharmacy licensee:

(a) May prepare radiopharmaceuticals for medical use provided the radiopharmaceutical is prepared by or under the supervision of an authorized nuclear pharmacist.

(b) May allow a pharmacist to work as an authorized nuclear pharmacist if this individual meets the state board of pharmacy requirements in WAC 246-903-030, Nuclear pharmacists.

(c) Shall provide to the department a copy of each individual's letter of notification from the state board of pharmacy recognizing the individual as a nuclear pharmacist, no later than thirty days after the date the licensee allows the individual to work as an authorized nuclear pharmacist pursuant to (b) of this subsection.

(3) A manufacturer or nuclear pharmacy licensee shall possess and use instrumentation to measure the radioactivity of radiopharmaceuticals. The licensee shall have procedures for use of the instrumentation. The licensee shall measure, by direct measurement or by combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta-, or photon-emitting radiopharmaceuticals, prior to transfer for commercial distribution. In addition, the licensee shall:

(a) Perform tests before initial use, periodically, and following repair, on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument; and make adjustments when necessary; and

(b) Check each instrument for constancy and proper operation at the beginning of each day of use.

(4) Nothing in this section relieves the licensee from complying with applicable FDA, other Federal, and state requirements governing radiopharmaceuticals.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-100, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-100, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-100, filed 12/27/90, effective 1/31/91. Statutory

Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-22-110, filed 12/8/80. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-110, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-076.]

WAC 246-235-102 Manufacture and distribution of sources or devices containing radioactive material for medical use. An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to WAC 246-235-080(3) for use as a calibration or reference source or for the uses listed in Group VI of WAC 246-235-120 Schedule A of this part will be approved if:

(1) The applicant satisfies the general requirements in WAC 246-235-020 of this part;

(2) The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

(a) The radioactive material contained, its chemical and physical form and amount;

(b) Details of design and construction of the source or device;

(c) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and accidents;

(d) For devices containing radioactive material, the radiation profile of a prototype device;

(e) Details of quality control procedures to assure that production sources and devices meet the standards of the design and prototype tests;

(f) Procedures and standards for calibrating sources and devices;

(g) Legend and methods for labeling sources and devices as to their radioactive content; and

(h) Instructions for handling and storing the source or device from the radiation safety standpoint, these instructions are to be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device: Provided, That instructions which are too lengthy for such label may be summarized on the label and printed in detail on a brochure which is referenced on the label.

(3) The label affixed to the source or device, or to the permanent storage container for the source or device, contains information on the radionuclide, quantity and date of assay, and a statement that the named source or device is licensed by the department for distribution to persons licensed pursuant to WAC 246-235-080(3) and Group VI of WAC 246-235-120 Schedule A or under equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state: Provided, That such labeling for sources which do not require long term storage (e.g., gold-198 seeds) may be on a leaflet or brochure which accompanies the source.

(4) In the event the applicant desires that the source or device be required to be tested for leakage of radioactive material at intervals longer than six months, the applicant shall include in the application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the source or device or similar sources or

devices and by design features that have a significant bearing on the probability or consequences of leakage of radioactive material from the source.

(5) In determining the acceptable interval for test of leakage of radioactive material, the department will consider information that includes, but is not limited to:

- (a) Primary containment (source capsule);
- (b) Protection of primary containment;
- (c) Method of sealing containment;
- (d) Containment construction materials;
- (e) Form of contained radioactive material;
- (f) Maximum temperature withstood during prototype tests;
- (g) Maximum pressure withstood during prototype tests;
- (h) Maximum quantity of contained radioactive material;
- (i) Radiotoxicity of contained radioactive material; and
- (j) Operating experience with identical sources or devices or similarly designed and constructed sources or devices.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-102, filed 6/8/98, effective 7/9/98.]

WAC 246-235-105 Manufacture, assembly or distribution of radioactive material exempt from regulation.

(1) *Licensing the introduction of radioactive material into products in exempt concentrations.* In addition to the requirements set forth in WAC 246-235-020, a specific license authorizing the introduction of radioactive material into a product or material owned by or in the possession of the licensee or another to be transferred to persons exempt under WAC 246-232-010(1) will be issued if:

(a) The applicant submits a description of the product or material into which the radioactive material will be introduced, intended use of the radioactive material and the product or material into which it is introduced, method of introduction, initial concentration of the radioactive material in the product or material, control methods to assure that no more than the specified concentration is introduced into the product or material, estimated time interval between introduction and transfer of the product or material, and estimated concentration of the radioactive material in the product or material at the time of transfer; and

(b) The applicant provides reasonable assurance that the concentrations of radioactive material at the time of transfer will not exceed the concentrations in WAC 246-232-130, Schedule C, that reconstruction of the radioactive material in concentrations exceeding those in WAC 246-232-130, Schedule C, is not likely, that use of lower concentrations is not feasible, and that the product or material is not likely to be incorporated in any food, beverage, cosmetic, drug or other commodity or product designed for ingestion or inhalation by, or application to a human being.

(c) Each person licensed under subsection (1) of this section shall file an annual report with the department which shall identify the type and quantity of each product or material into which radioactive material has been introduced during the reporting period; name and address of the person who owned or possessed the product and material, into which radioactive material has been introduced, at the time of introduction; the type and quantity of radionuclide introduced into

each such product or material; and the initial concentrations of the radionuclide in the product or material at time of transfer of the radioactive material by the licensee. If no transfers of radioactive material have been made pursuant to subsection (1) of this section during the reporting period, the report shall so indicate. The report shall cover the year ending June 30, and shall be filed within thirty days thereafter.

(2) Licensing the distribution of certain radioactive material in exempt quantities.*

*Note: Authority to transfer possession or control by the manufacturer, processor or producer of any equipment, device, commodity or other product containing source material or byproduct material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(a) An application for a specific license to distribute naturally occurring and accelerator-produced radioactive material (NARM) to persons exempted from these regulations pursuant to WAC 246-232-010 (2)(b) will be approved if:

(i) The radioactive material is not contained in any food, beverage, cosmetic, drug or other commodity designed for ingestion or inhalation by, or application to, a human being;

(ii) The radioactive material is in the form of processed chemical elements, compounds, or mixtures, tissue samples, bioassay samples, counting standards, plated or encapsulated sources, or similar substances, identified as radioactive and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product, or device intended for commercial distribution; and

(iii) The applicant submits copies of prototype labels and brochures and the department approves such labels and brochures.

(b) The license issued under paragraph (2)(a) of this section is subject to the following conditions:

(i) No more than ten exempt quantities shall be sold or transferred in any single transaction. However, an exempt quantity may be composed of fractional parts of one or more of the exempt quantity provided the sum of the fractions shall not exceed unity.

(ii) Each exempt quantity shall be separately and individually packaged. No more than ten such packaged exempt quantities shall be contained in any outer package for transfer to persons exempt pursuant to WAC 246-232-010 (2)(b). The outer package shall be such that the dose rate at the external surface of the package does not exceed 0.5 millirem per hour.

(iii) The immediate container of each quantity or separately packaged fractional quantity of radioactive material shall bear a durable, legible label which:

(A) Identifies the radionuclide and the quantity of radioactivity; and

(B) Bears the words "radioactive material."

(iv) In addition to the labeling information required by item (2)(b)(iii) of this section, the label affixed to the immediate container, or an accompanying brochure, shall:

(A) State that the contents are exempt from licensing state requirements;

(B) Bear the words "Radioactive material—Not for human use—Introduction into foods, beverages, cosmetics, drugs, or medicinals, or into products manufactured for com-

mercial distribution is prohibited—Exempt quantities should not be combined"; and

(C) Set forth appropriate additional radiation safety precautions and instructions relating to the handling, use, storage and disposal of the radioactive material.

(c) Each person licensed under paragraph (2)(a) of this section shall maintain records identifying, by name and address, each person to whom radioactive material is transferred for use under WAC 246-232-010 (2)(b) or the equivalent regulations of a licensing state, and stating the kinds and quantities of radioactive material transferred. An annual summary report stating the total quantity of each radionuclide transferred under the specific license shall be filed with the department. Each report shall cover the year ending June 30, and shall be filed within thirty days thereafter. If no transfers of radioactive material have been made pursuant to subsection (2) of this section during the reporting period, the report shall so indicate.

(3) *Licensing the incorporation of naturally occurring and accelerator-produced radioactive material into gas and aerosol detectors.* An application for a specific license authorizing the incorporation of NARM into gas and aerosol detectors to be distributed to persons exempt under WAC 246-232-012 will be approved if the application satisfies requirements equivalent to those contained in Section 32.26 of 10 CFR Part 32.

[Statutory Authority: RCW 70.98.050, 01-02-067, § 246-235-105, filed 12/29/00, effective 1/29/01; 98-13-037, § 246-235-105, filed 6/8/98, effective 7/9/98.]

WAC 246-235-110 Special requirements for issuance of specific licenses for source material milling. In addition to the requirements set forth in WAC 246-235-020, a specific license for source material milling will be issued if the applicant submits to the department a satisfactory application as described herein and meets the other conditions specified below:

(1) An application for a license to receive title to, receive, possess, and use source material for milling or byproduct material as defined in WAC 246-220-010 shall address the following:

(a) Description of the proposed project or action.

(b) Area/site characteristics including geology, demography, topography, hydrology and meteorology.

(c) Radiological and nonradiological impacts of the proposed project or action, including waterway and groundwater impacts.

(d) Environmental effects of accidents.

(e) Tailings disposal and decommissioning.

(f) Site and project alternatives.

(g) Description of how the provisions of chapter 246-252 WAC shall be met.

(2) Pursuant to WAC 246-235-080 (6)(a)(i) the applicant shall not commence construction of the project until the department has weighed the environmental, economic, technical, and other benefits against the environmental costs and has concluded that the issuance of the license is appropriate.

(3) Prior to issuance of a license, a public hearing shall be held. The scope shall extend to the question of license

issuance and the adequacy of the reclamation, disposal, decommissioning, and decontamination plans.

(4) At least one full year prior to any major site construction, a preoperational monitoring program shall be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program shall be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

(5) Prior to issuance of the license, the mill operator shall establish financial surety arrangements consistent with the requirements of WAC 246-252-030.

(6) The applicant shall provide procedures describing the means employed to meet the following requirements during the operational phase of any project.

(a) Milling operations shall be conducted so that all effluent releases are reduced to as low as is reasonably achievable below the limits of chapter 246-221 WAC.

(b) The mill operator shall conduct at least daily inspection of any tailings or waste retention systems. Records of such inspections shall be maintained for review by the department.

(c) The mill operator shall immediately notify the department of the following:

(i) Any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas; and

(ii) Any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

(7) An application for a license to own, receive, possess and use byproduct material as defined in WAC 246-220-010 shall contain proposed specifications relating to the emissions control and disposition of the byproduct material to achieve the requirements and objectives set forth in the criteria listed in WAC 246-252-030.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-110, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-150, filed 12/11/86. Statutory Authority: Chapter 70.121 RCW, 81-16-031 (Order 1683), § 402-22-150, filed 7/28/81.]

WAC 246-235-120 Schedule A groups of medical uses of radioactive material (ref. WAC 246-235-080(3) and 246-235-100(9)). (1) *Group I.* Use of prepared radiopharmaceuticals for certain diagnostic studies involving measurements of uptake, dilution and excretion. This group does not include imaging or localization studies.

(a) Any radioactive material in a radiopharmaceutical and for a diagnostic use involving measurements of uptake, dilution or excretion obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical

uses, or an individual under the supervision of either as permitted by statute.

(b) The provisions of (a) of this subsection notwithstanding, no radioactive material in gaseous form or for use as an aerosol is permitted by this subsection except as specifically authorized in a license.

(2) *Group II.* Use of prepared radiopharmaceuticals for diagnostic imaging and localization studies.

(a) Any radioactive material in a radiopharmaceutical and for a diagnostic use involving imaging or localizing obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute;

(b) The provisions of (a) of this subsection notwithstanding, no radioactive material in gaseous form or for use as an aerosol is permitted by this subsection except as specifically authorized by a license or subsection (3)(b) of this section.

(3) *Group III.* Use of generators and reagent kits for the preparation and use of radiopharmaceuticals containing radioactive material for diagnostic imaging and localization studies.

(a) Any generator or reagent kit for preparation and diagnostic use of a radiopharmaceutical containing radioactive material obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute.

(b) The provisions of (a) of this subsection notwithstanding, no generator or reagent kit is authorized for preparation of any gaseous form or aerosol of a radioactive material, except Technetium-99m as sodium pentetate as an aerosol for pulmonary function studies when used only with an approved and shielded delivery system, and disposed in accordance with applicable requirements, or as specifically authorized in a license.

(4) *Group IV.* Use of prepared radiopharmaceuticals for certain therapeutic uses that do not normally require hospitalization for purposes of radiation safety.

(a) Iodine-131 as iodide for treatment of hyperthyroidism and cardiac dysfunction;

(b) Phosphorus-32 as soluble phosphate for treatment of polycythemia vera, leukemia and bone metastases;

(c) Phosphorus-32 as colloidal chromic phosphate for intracavitary treatment of malignant effusions;

(d) Any radioactive material in a radiopharmaceutical and for a therapeutic use not normally requiring hospitalization for purposes of radiation safety obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute.

(5) *Group V.* Use of prepared radiopharmaceuticals for certain therapeutic uses that normally require hospitalization for purposes of radiation safety.

(a) Gold-198 as colloid for intracavitary treatment of malignant effusions;

(b) Iodine-131 as iodide for treatment of thyroid carcinoma;

(c) Any radioactive material in a radiopharmaceutical and for a therapeutic use normally requiring hospitalization for radiation safety reasons obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute.

(6) *Group VI.* Use of sources and devices containing radioactive material for certain medical uses.

(a) Americium-241 as a sealed source in a device for bone mineral analysis;

(b) Cesium-137 encased in needles and applicator cells for topical, interstitial, and intracavitary treatment of cancer;

(c) Cobalt-60 encased in needles and applicator cells for topical, interstitial, and intracavitary treatment of cancer;

(d) Gold-198 as seeds for interstitial treatment of cancer;

(e) Iodine-125 as a sealed source in a device for bone mineral analysis;

(f) Gadolinium-153 as a sealed source in a device for bone mineral analysis;

(g) Iridium-192 as seeds encased in nylon ribbon for interstitial treatment of cancer;

(h) Strontium-90 sealed in an applicator for treatment of superficial eye conditions; and

(i) Iodine-125 as seeds for interstitial treatment of cancer.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-235-120, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-200, filed 12/11/86. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-22-200, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-200, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-260.]

WAC 246-235-130 Appendix—General laboratory rules for safe use of unsealed sources. (1) In addition to the requirements set forth in WAC 246-235-020, a specific licensee who uses unsealed, unplated and/or liquid sources shall possess adequate facilities including ventilation systems which are compatible with the proposed uses: and,

(2) Possess, use, and store, radioactive materials in accordance with, but not limited to, the following:

(a) Receive, handle, and store radioactive materials only at specifically designated locations within the applicant's facility. Vessels containing radioactive material must be labeled as required by chapter 246-221 WAC.

(b) Wear disposable gloves at all times when handling dispersible radioactive material or potentially contaminated items.

(c) Wear personnel monitoring devices (film badge and/or TLD), when required, at all times when working with, or in the vicinity of, radioactive materials. Extremity doses shall be considered in evaluating the need for separate extremity dosimeters. Extremity dosimetry should be worn when working with millicurie or greater quantities of material (excluding low energy beta emitters and pure alpha emitters). Monitoring devices, when not in use, shall be stored only in a designated low-background area. Calculations based on whole body badge results for photon emitters may be used in lieu of separate extremity dosimeters.

(d) Use remote tools, lead shields, lead-glass shields, and/or plexiglass shields as appropriate.

(e) Prohibit eating, chewing, drinking, smoking, and application of cosmetics in any area where radioactive material is used or stored.

(f) Do not store food, drink or personal effects in any area, container, or refrigerator designated for radioactive materials use or storage.

(g) Do not pipette radioactive materials or perform any similar operation by employing mouth suction.

(h) Use disposable absorbent material with impervious backing to cover work surfaces where spillage is possible.

(i) Properly dress and protect open wounds on exposed body surfaces before working with radioactive materials.

(j) Wear laboratory coats when working with radioactive material. Potentially contaminated laboratory coats shall not be worn outside the immediate work area.

(k) Nuclides in gaseous or volatile form, or with a high potential for volatilization shall be used only in areas with adequate ventilation systems.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-235-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-240, filed 12/11/86; 83-19-050 (Order 2026), § 402-22-240, filed 9/16/83.]

WAC 246-235-140 Schedule B, limits for broad licenses. (See also WAC 246-235-090)

Radioactive Material	Col. I curies	Col. II curies
Antimony-122	1	0.01
Antimony-124	1	0.01
Antimony-125	1	0.01
Arsenic-73	10	0.1
Arsenic-74	1	0.01
Arsenic-76	1	0.01
Arsenic-77	10	0.1
Barium-131	10	0.1
Barium-140	1	0.01
Beryllium-7	10	0.1
Bismuth-210	0.1	0.001
Bromine-82	10	0.1
Cadmium-109	1	0.01
Cadmium-115m	1	0.01
Cadmium-115	10	0.1
Calcium-45	1	0.01
Calcium-47	10	0.1

Radioactive Material	Col. I curies	Col. II curies
Carbon-14	100	1.
Cerium-141	10	0.1
Cerium-143	10	0.1
Cerium-144	0.1	0.001
Cesium-131	100	1.
Cesium-134m	100	1.
Cesium-134	0.1	0.001
Cesium-135	1	0.01
Cesium-136	10	0.1
Cesium-137	0.1	0.001
Chlorine-36	1	0.01
Chlorine-38	100	1.
Chromium-51	100	1.
Cobalt-57	10	0.1
Cobalt-58m	100	1.
Cobalt-58	1	0.01
Cobalt-60	0.1	0.001
Copper-64	10	0.1
Dysprosium-165	100	1.
Dysprosium-166	10	0.1
Erbium-169	10	0.1
Erbium-171	10	0.1
Europium-152 (9.2h)	10	0.1
Europium-152 (13 y)	0.1	0.001
Europium-154	0.1	0.001
Europium-155	1	0.01
Fluorine-18	100	1.
Gadolinium-153	1	0.01
Gadolinium-159	10	0.1
Gallium-72	10	0.1
Germanium-71	100	1.
Gold-198	10	0.1
Gold-199	10	0.1
Hafnium-181	1	0.01
Holmium-166	10	0.1
Hydrogen-3	100	1.
Indium-113m	100	1.
Indium-114m	1	0.01
Indium-115m	100	1.
Indium-115	1	0.01
Iodine-125	0.1	0.001
Iodine-126	0.1	0.001
Iodine-129	0.1	0.001
Iodine-131	0.1	0.001
Iodine-132	10	0.1
Iodine-133	1	0.01
Iodine-134	10	0.1
Iodine-135	1	0.01
Iridium-192	1	0.01
Iridium-194	10	0.1
Iron-55	10	0.1
Iron-59	1	0.01
Krypton-85	100	1.
Krypton-87	10	0.1
Lanthanum-140	1	0.01
Lutetium-177	10	0.1
Manganese-52	1	0.01
Manganese-54	1	0.01

Radioactive Material	Col. I curies	Col. II curies	Radioactive Material	Col. I curies	Col. II curies
Manganese-56	10	0.1	Strontium-91	10	0.1
Mercury-197m	10	0.1	Strontium-92	10	0.1
Mercury-197	10	0.1	Sulphur-35	10	0.1
Mercury-203	1	0.01	Tantalum-182	1	0.01
Molybdenum-99	10	0.1	Technetium-96	10	0.1
Neodymium-147	10	0.1	Technetium-97m	10	0.1
Neodymium-149	10	0.1	Technetium-97	10	0.1
Nickel-59	10	0.1	Technetium-99m	100	1.
Nickel-63	1	0.01	Technetium-99	1	0.01
Nickel-65	10	0.1	Tellurium-125m	1	0.01
Niobium-93m	1	0.01	Tellurium-127m	1	0.01
Niobium-95	1	0.01	Tellurium-127	10	0.1
Niobium-97	100	1.	Tellurium-129m	1	0.01
Osmium-185	1	0.01	Tellurium-129	100	1.
Osmium-191m	100	1.	Tellurium-131m	10	0.1
Osmium-191	10	0.1	Tellurium-132	1	0.01
Osmium-193	10	0.1	Terbium-160	1	0.01
Palladium-103	10	0.1	Thallium-200	10	0.1
Palladium-109	10	0.1	Thallium-201	10	0.1
Phosphorus-32	1	0.01	Thallium-202	10	0.1
Platinum-191	10	0.1	Thallium-204	1	0.01
Platinum-193m	100	1.	Thulium-170	1	0.01
Platinum-193	10	0.1	Thulium-171	1	0.01
Platinum-197m	100	1.	Tin-113	1	0.01
Platinum-197	10	0.1	Tin-125	1	0.01
Polonium-210	0.01	0.0001	Tungsten-181	1	0.01
Potassium-42	1	0.01	Tungsten-185	1	0.01
Praseodymium-142	10	0.1	Tungsten-187	10	0.1
Praseodymium-143	10	0.1	Vanadium-48	1	0.01
Promethium-147	1	0.01	Xenon-131m	1,000	10.
Promethium-149	10	0.1	Xenon-133	100	1.
Radium-226	0.01	0.0001	Xenon-135	100	1.
Rhenium-186	10	0.1	Ytterbium-175	10	0.1
Rhenium-188	10	0.1	Yttrium-90	1	0.01
Rhodium-103m	1,000	10.	Yttrium-91	1	0.01
Rhodium-105	10	0.1	Yttrium-92	10	0.1
Rubidium-86	1	0.01	Yttrium-93	1	0.01
Rubidium-87	1	0.01	Zinc-65	1	0.01
Ruthenium-97	100	1.	Zinc-69m	10	0.1
Ruthenium-103	1	0.01	Zinc-69	100	1.
Ruthenium-105	10	0.1	Zirconium-93	1	0.01
Ruthenium-106	0.1	0.001	Zirconium-95	1	0.01
Samarium-151	1	0.01	Zirconium-97	1	0.01
Samarium-153	10	0.1	Any radioactive material other than source material, special nuclear material, or alpha emitting radioactive material not listed above.	0.1	0.001
Scandium-46	1	0.01			
Scandium-47	10	0.1			
Scandium-48	1	0.01			
Selenium-75	1	0.01			
Silicon-31	10	0.1			
Silver-105	1	0.01			
Silver-110m	0.1	0.001			
Silver-111	10	0.1			
Sodium-22	0.1	0.001			
Sodium-24	1	0.01			
Strontium-85m	1,000	10.			
Strontium-85	1	0.01			
Strontium-89	1	0.01			
Strontium-90	0.01	0.0001			

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-250, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-270.]

WAC 246-235-150 Schedule C—Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release.

Radioactive material ¹	Release fraction	Possession limit (curies)
Actinium-228	0.001	4,000
Americium-241	.001	2
Americium-242	.001	2
Americium-243	.001	2
Antimony-124	.01	4,000
Antimony-126	.01	6,000
Barium-133	.01	10,000
Barium-140	.01	30,000
Bismuth-207	.01	5,000
Bismuth-210	.01	600
Cadmium-109	.01	1,000
Cadmium-113	.01	80
Calcium-45	.01	20,000
Californium-252 ²	.001	9
Carbon-14 ³	.01	50,000
Cerium-141	.01	10,000
Cerium-144	.01	300
Cesium-134	.01	2,000
Cesium-137	.01	3,000
Chlorine-36	.5	100
Chromium-51	.01	300,000
Cobalt-60	.001	5,000
Copper-64	.01	200,000
Curium-242	.001	60
Curium-243	.001	3
Curium-244	.001	4
Curium-245	.001	2
Europium-152	.01	500
Europium-154	.01	400
Europium-155	.01	3,000
Germanium-68	.01	2,000
Gadolinium-153	.01	5,000
Gold-198	.01	30,000
Hafnium-172	.01	400
Hafnium-181	.01	7,000
Holmium-166m	.01	100
Hydrogen-3	.5	20,000
Iodine-125	.5	10
Iodine-131	.5	10
Indium-114m	.01	1,000
Iridium-192	.001	40,000
Iron-55	.01	40,000
Iron-59	.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	.01	8
Manganese-56	.01	60,000
Mercury-203	.01	10,000
Molybdenum-99	.01	30,000
Neptunium-237	.001	2
Nickel-63	.01	20,000
Niobium-94	.01	300
Phosphorus-32	.5	100
Phosphorus-33	.5	1,000
Polonium-210	.01	10
Potassium-42	.01	9,000

Radioactive material ¹	Release fraction	Possession limit (curies)
Promethium-145	.01	4,000
Promethium-147	.01	4,000
Ruthenium-106	.01	200
Samarium-151	.01	4,000
Scandium-46	.01	3,000
Selenium-75	.01	10,000
Silver-110m	.01	1,000
Sodium-22	.01	9,000
Sodium-24	.01	10,000
Strontium-89	.01	3,000
Strontium-90	.01	90
Sulfur-35	.5	900
Technetium-99	.01	10,000
Technetium-99m	.01	400,000
Tellurium-127m	.01	5,000
Tellurium-129m	.01	5,000
Terbium-160	.01	4,000
Thulium-170	.01	4,000
Tin-113	.01	10,000
Tin-123	.01	3,000
Tin-126	.01	1,000
Titanium-44	.01	100
Uranium Hexafluoride	.001	Note ⁴
Vanadium-48	.01	7,000
Xenon-133	1.0	900,000
Yttrium-91	.01	2,000
Zinc-65	.01	5,000
Zirconium-93	.01	400
Zirconium-95	.01	5,000
Any other beta-gamma emitter	.01	10,000
Mixed fission products	.01	1,000
Mixed corrosion products	.01	10,000
Contaminated equipment beta-gamma	.001	10,000
Irradiated material, any form other than solid non-combustible	.01	1,000
Irradiated material, solid noncombustible	.001	10,000
Mixed radioactive waste, beta-gamma	.01	1,000
Packaged mixed waste, beta-gamma ⁵	.001	10,000
Any other alpha emitter	.001	2
Contaminated equipment, alpha	.0001	20
Packaged waste, alpha ⁵	.0001	20
Combinations of radioactive materials listed above ¹		

¹ For combinations of radioactive materials, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Schedule C exceeds one.

² For Californium-252, the quantity may also be expressed as 20 milligrams.

³ Excludes Carbon-14 as carbon dioxide.

⁴ For uranium hexafluoride, the quantity is 50 kilograms in a single container or 1,000 kilograms total.

⁵ Waste packaged in Type B containers does not require an emergency plan.

[Statutory Authority: RCW 70.98.050, 95-01-108, § 246-235-150, filed 12/21/94, effective 1/21/95.]

Chapter 246-239 WAC

RADIATION PROTECTION—NUCLEAR MEDICINE

WAC

246-239-001	Purpose and scope.
246-239-010	Definitions.
246-239-020	Radiation safety committee.
246-239-022	Policy and procedures for radiopharmaceutical administration.
246-239-025	Notifications, records, and reports of radiopharmaceutical misadministrations.
246-239-030	Personnel monitoring.
246-239-035	Bioassay.
246-239-040	Radiopharmaceuticals.
246-239-050	Radionuclide generators.
246-239-055	Release of individuals containing radiopharmaceuticals.
246-239-060	Laboratory safety.
246-239-070	Surveys.
246-239-080	Calibration and reference sources.
246-239-090	Instrumentation.
246-239-100	Radioactive gases.

WAC 246-239-001 Purpose and scope. The provisions of this chapter apply to all licensees utilizing radioactive materials in the practice of nuclear medicine and establish radiation safety requirements for those licensees. These provisions are in addition to, and not in substitution for, other applicable provisions of these regulations.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-239-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-34-010, filed 9/16/83.]

WAC 246-239-010 Definitions. (1) "Authorized nuclear pharmacist" means a pharmacist who is identified as an authorized nuclear pharmacist on a department license that authorizes the use of radioactive material in the practice of nuclear pharmacy.

(2) "Authorized user" means a physician who is identified as an authorized user on a department, U.S. Nuclear Regulatory Commission or agreement state license that authorizes the medical use of radioactive material.

(3) "Diagnostic clinical procedures manual" means a collection of written procedures that describes each method (and other instructions and precautions) by which the licensee performs diagnostic clinical procedures; where each diagnostic clinical procedure has been approved by the authorized user and includes the radiopharmaceutical, dosage, and route of administration.

(4) "Medical use" means the intentional internal or external administration of radioactive material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

(5) "Nuclear medicine" means the intentional internal or external administration of unsealed radioactive material to human beings.

(6) "Nuclear medicine technologist" means any individual who performs nuclear medical procedures under the supervision of a physician licensed pursuant to chapter 246-235 WAC.

(2003 Ed.)

(7) "Prescribed dosage" means the quantity of radiopharmaceutical activity as documented:

(a) In a written directive; or

(b) Either in the diagnostic clinical procedures manual or in any appropriate record in accordance with the directions of the authorized user for diagnostic procedures.

(8) "Radiopharmaceutical misadministration" means the administration of:

(a) A radiopharmaceutical dosage greater than 30 microcuries of sodium iodide I-125 or I-131:

(i) Involving the wrong individual or wrong radiopharmaceutical; or

(ii) When both the administered dosage differs from the prescribed dosage by more than twenty percent of the prescribed dosage, and the difference between the administered dosage and prescribed dosage exceeds 30 microcuries;

(b) A therapeutic radiopharmaceutical dosage, other than sodium iodide I-125 or I-131:

(i) Involving the wrong individual, wrong radiopharmaceutical, or wrong route of administration; or

(ii) When the administered dosage differs from the prescribed dosage by more than twenty percent of the prescribed dosage;

(c) A diagnostic radiopharmaceutical dosage, other than quantities greater than 30 microcuries of sodium iodide I-125 or I-131, both:

(i) Involving the wrong individual, wrong radiopharmaceutical, wrong route of administration, or when the administered dosage differs from the prescribed dosage; and

(ii) When the dose to the individual exceeds 5 rems effective dose equivalent or 50 rems dose equivalent to any individual organ.

(9) "Recordable event" means the administration of:

(a) A radiopharmaceutical without a written directive where a written directive is required;

(b) A radiopharmaceutical where a written directive is required without daily recording of each administered radiopharmaceutical dosage in the appropriate record;

(c) A radiopharmaceutical dosage greater than 30 microcuries of either sodium iodide I-125 or I-131 when both:

(i) The administered dosage differs from the prescribed dosage by more than 10 percent of the prescribed dosage; and

(ii) The difference between the administered dosage and prescribed dosage exceeds 15 microcuries;

(d) A therapeutic radiopharmaceutical dosage, other than sodium iodide I-125 or I-131, when the administered dosage differs from the prescribed dosage by more than 10 percent of the prescribed dosage.

(10) "Training" means instruction or experience acquired under the direct supervision of a physician, a certified/registered nuclear medicine technologist, and/or a qualified expert who has the necessary knowledge and training to advise personnel on radiation protection.

(11) "Written directive" means an order in writing for a specific patient or human research subject, dated and signed by an authorized user prior to the administration of a radiopharmaceutical, containing the following information:

(a) For any administration of quantities greater than 30 microcuries of sodium iodide I-125 or I-131: The dosage;

[Title 246 WAC—p. 373]

(b) For a therapeutic administration of a radiopharmaceutical other than sodium iodide I-125 or I-131: The radiopharmaceutical, dosage, and route of administration.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-239-010, filed 2/21/92, effective 3/23/92; 91-15-112 (Order 184), § 246-239-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-030, filed 9/16/83.]

WAC 246-239-020 Radiation safety committee. (1)

Where required by license condition or pursuant to WAC 246-235-080(1), the radiation safety committee, shall meet at least once every calendar quarter. Such meetings shall be documented by written minutes and those minutes shall be maintained for inspection by the department for at least two years.

(2) Evaluation of the adequacy of the licensee's radiation safety program for radiation safety, for adherence to the policy and procedures for radiopharmaceutical administration program, and adherence to the ALARA concept shall be conducted at least once each calendar year with an interval of no more than five calendar quarters between each evaluation. Such evaluations may be performed by the radiation safety officer, a competent outside agent, or by qualified personnel at the licensee's own facility. These evaluations shall be documented, maintained for inspection by the department, and presented in a timely manner to the radiation safety committee for review and approval and, where necessary, recommend timely corrective action to the licensee's management.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-020, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-050, filed 9/16/83.]

WAC 246-239-022 Policy and procedures for radiopharmaceutical administration. (1) Each licensee shall establish and maintain a written program to provide assurance that radioactive material or radiation from radioactive material will be administered as directed by the authorized user ordering the administration. The program must include written policies and procedures to meet the following specific objectives:

(a) That, prior to administration, a written directive is prepared for:

(i) Any administration of quantities greater than 30 microcuries of sodium iodide I-131; or

(ii) Any therapeutic administration of a radiopharmaceutical, other than sodium iodide I-131. A written revision to an existing written directive may be made for any diagnostic or therapeutic procedure provided the revision is dated and signed by the authorized user prior to the administration of the radiopharmaceutical or radiobiologic dosage. If a delay would jeopardize the patient's health, and the authorized user is not personally assaying and administering the dose, an oral directive or revision to an existing written directive will be acceptable, provided the oral revision is documented immediately in the patient's chart or record, and the revised written directive is signed by the authorized user within forty-eight hours of the oral revision;

diately in the patient's chart or record, and the revised written directive is signed by the authorized user within forty-eight hours of the oral revision;

Note: A written directive is not required when an authorized user personally assays and administers a dosage provided the pertinent facts are documented as otherwise required.

(b) That, prior to each administration, the patient's identity is verified by more than one method as the individual named in the written directive;

(c) That each administration is in accordance with the written directive; and

(d) That any unintended deviation from the written directive is identified and evaluated, and appropriate action is taken.

(2) The licensee shall:

(a) Develop procedures for and conduct a review of the radiopharmaceutical administration program including, since the last review, an evaluation of:

(i) A representative sample of patient and human research subject administrations;

(ii) All recordable events; and

(iii) All misadministrations to verify compliance with all aspects of the radiopharmaceutical administration program; these reviews shall be conducted at intervals no greater than twelve months;

(b) Evaluate each of these reviews to determine the effectiveness of the radiopharmaceutical administration program and, if required, make modifications to meet the objectives of subsection (1) of this section; and

(c) Retain records of each review, including the evaluations and findings of the review, in an auditable form for three years.

(3) The licensee shall evaluate and respond, within thirty days after discovery of the recordable event, to each recordable event by:

(a) Assembling the relevant facts including the cause;

(b) Identifying what, if any, corrective action is required to prevent recurrence; and

(c) Retaining a record, in an auditable form, for three years, of the relevant facts and what corrective action, if any, was taken.

(4) The licensee shall retain:

(a) Each written directive (provided, however, that such written directive is not required if the dose is both personally assayed and administered by the authorized user); and

(b) A record of each administered radiation dose or radiopharmaceutical dosage where a written directive is required in subsection (1)(a) of this section, in an auditable form, for three years after the date of administration.

(5) The licensee may make modifications to the program to increase the program's efficiency provided the program's effectiveness is not decreased.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-022, filed 6/8/98, effective 7/9/98; 94-06-017, § 246-239-022, filed 2/22/94, effective 3/25/94.]

WAC 246-239-025 Notifications, records, and reports of radiopharmaceutical misadministrations. (1) The licensee shall notify the department by telephone at

(206) 682-5327 no later than the next calendar day after the discovery of a radiopharmaceutical misadministration.

(2) The licensee also shall notify the referring physician and the individual receiving the radiopharmaceutical misadministration (or the individual's responsible relative or guardian) of the radiopharmaceutical misadministration not later than twenty-four hours after its discovery, unless the referring physician personally informs the licensee either that the physician will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or individual receiving the radiopharmaceutical misadministration cannot be reached within twenty-four hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the radiopharmaceutical misadministration, because of any delay in notification.

(3) The licensee shall submit a written report to the department within fifteen days after discovery of the radiopharmaceutical misadministration. The written report must include the licensee's name; the prescribing physician's name; a brief description of the event; why the event occurred; the effect on the individual who received the radiopharmaceutical misadministration; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the licensee notified the individual, and if not, why not, and if there was notification, what information was provided. The report shall not include the individual's name or other information that could lead to identification of the individual. To meet the requirements of this section, the notification of the individual receiving the radiopharmaceutical misadministration may be made instead to that individual's responsible relative or guardian, when appropriate.

(4) If the individual was notified, the licensee shall also furnish, within fifteen days after discovery of the radiopharmaceutical misadministration, a written report to the individual by sending either:

(a) A copy of the report that was submitted to the department; or

(b) A brief description of both the radiopharmaceutical misadministration and the consequences, as they may affect the individual, and a statement informing the individual that the report submitted to the department can be obtained from the licensee.

(5) Each licensee shall retain a record of each radiopharmaceutical misadministration for five years. The record shall contain the names of all individuals involved (including the prescribing physician, allied health personnel, the individual who received the radiopharmaceutical misadministration, and the individual's referring physician, if applicable), the individual's Social Security number or identification number if one has been assigned, a brief description of the radiopharmaceutical misadministration, why it occurred, the effect on the individual, improvements needed to prevent recurrence, and the actions taken to prevent recurrence.

(6) Aside from the notification requirement, nothing in this section affects any rights or duties of licensees and physicians in relation to each other, to individuals receiving

radiopharmaceutical misadministrations, or to that individual's responsible relatives or guardians.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-025, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-239-025, filed 2/21/92, effective 3/23/92.]

WAC 246-239-030 Personnel monitoring. In addition to the requirements of WAC 246-221-090 and the conditions of the license, extremity monitoring (such as TLD ring badges) shall be provided and used on a monthly exchange basis for those personnel who routinely inject radiopharmaceuticals and/or elute Tc 99m/Mo 99 generators.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-030, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-090, filed 9/16/83.]

WAC 246-239-035 Bioassay. Each licensee who uses Iodine 131 for diagnostic or therapeutic purposes shall conduct a radioiodine bioassay program in accordance with the criteria set forth in Washington State Regulatory Guide 8.20, "Bioassay Program Criteria for I-125 and I-131." When radioiodine capsules are used exclusively, bioassay is required only when capsules are opened, breached, or crushed.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-035, filed 2/22/94, effective 3/25/94.]

WAC 246-239-040 Radiopharmaceuticals. (1) Radioactive material to be administered to humans shall be obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for the radioactive material to be administered, or an individual under the supervision of either as permitted by statute.

(2) The provisions of this part notwithstanding:

(a) No radioactive material in gaseous form or for use as an aerosol is permitted except Technetium-99m pentetate used as an aerosol for lung function studies, or as specifically authorized by license condition. Radioactive aerosols must be administered with a closed, shielded system that either is vented to the outside atmosphere through an air exhaust or provides for collection and disposal of the aerosol; and

(b) No generator or reagent kit is authorized for preparation of any gaseous form or aerosol of the radioactive material, except as specifically authorized by license condition.

(3) Radioactive material to be administered to humans shall be assayed for activity to determine the dose within ten percent accuracy of the prescribed dose prior to being administered to patients.

(a) In the absence of a certificate from a supplier which specifies the activity of each dose, the licensee shall establish written procedures for the personnel to perform assays to an accuracy of ten percent of the prescribed dose prior to being administered to patients.

(b) The licensee shall maintain for inspection by the department, records of the results of each assay performed to determine the activity of each dose administered to a patient. Records shall be maintained for two years following performance of each assay.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-040, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-100, filed 9/16/83.]

WAC 246-239-050 Radionuclide generators. (1) Any licensee who uses generators and reagent kits shall elute the generator or process radioactive material with the reagent kit in accordance with instructions which are approved by the department, the United States Nuclear Regulatory Commission, an agreement state, or a licensing state, and are furnished by the manufacturer on the label attached to, or in the leaflet or brochure, which accompanies the generator or reagent kit.

(2) Tc-99m separated from Molybdenum 99 either by elution of a Molybdenum 99/Tc-99m generator or by an extraction process shall be tested to detect, and quantify Molybdenum 99 activity prior to administration to patients. The licensee shall not administer to patients Tc-99m containing more than 0.15 microcurie (5550 becquerels) of Molybdenum 99 per mCi (37 megabecquerels) of Tc-99m. The limits for Molybdenum 99 contamination represent maximum values and Molybdenum 99 contamination should be kept as low as reasonably achievable below these limits.

(a) In the absence of a certificate from the supplier of Tc-99m which specifies the quantity of Molybdenum 99, the licensee shall establish written procedures for personnel performing tests to detect and quantify Molybdenum 99 contamination. These procedures shall include all necessary calculations and steps to be taken if activities of Molybdenum 99 in excess of the limits specified in this part are detected.

(b) Personnel performing tests to detect and quantify Molybdenum 99 contamination shall be given specific training in performing these tests prior to conducting such tests.

(c) The licensee shall maintain for inspection by the department, records of the results of each test performed to detect and quantify Molybdenum 99 contamination and records of training given to personnel performing these tests. Records shall be maintained for two years following the performance of each test and the training of personnel.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-050, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-120, filed 9/16/83.]

WAC 246-239-055 Release of individuals containing radiopharmaceuticals. (1) The licensee may authorize the release from its control of any individual who has been administered radiopharmaceuticals if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 millisieverts (0.5 rem).

[Title 246 WAC—p. 376]

(2) The licensee shall provide the released individual with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 millisievert (0.1 rem). If the dose to a breast-feeding infant or child could exceed 1 millisievert (0.1 rem) assuming there were no interruption of breast-feeding, the instructions shall also include:

(a) Guidance on the interruption or discontinuation of breast-feeding; and

(b) Information on the consequences of failure to follow the guidance.

(3) The licensee shall maintain a record of the basis for authorizing the release of an individual, for three years after the date of release, if the total effective dose equivalent is calculated by:

(a) Using the retained activity rather than the activity administered;

(b) Using an occupancy factor less than 0.25 at 1 meter;

(c) Using the biological or effective half-life; or

(d) Considering the shielding by tissue.

(4) The licensee shall maintain a record, for three years after the date of release, that instructions were provided to a breast-feeding woman if the radiation dose to the infant or child from continued breast-feeding could result in a total effective dose equivalent exceeding 5 millisieverts (0.5 rem).

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-055, filed 6/8/98, effective 7/9/98.]

WAC 246-239-060 Laboratory safety. In addition to those requirements found in WAC 246-235-130, the licensee shall utilize syringe shields or other shielding devices for all manipulations. Syringe shields should be used for injections whenever practicable.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-34-140, filed 12/11/86; 83-19-050 (Order 2026), § 402-34-140, filed 9/16/83.]

WAC 246-239-070 Surveys. In addition to applicable requirements found elsewhere in these regulations, and the license, each licensee shall:

(1) Monitor hands and clothing for contamination after each procedure, or before leaving the work area;

(2) Survey the laboratory preparation and injection areas for contamination after each procedure, or at the end of the day using instrumentation capable of measuring nanocurie or becquerel amounts of activity. Survey documentation shall include an area diagram or a description of the area or article and the instrumentation used, the background levels in CPM, CPS, DPS, or DPM, the date of the survey, and the initials or name of the surveyor. Such documentation shall be maintained for inspection by the department for two years.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-070, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-150, filed 9/16/83.]

(2003 Ed.)

WAC 246-239-080 Calibration and reference

sources. (1) Any licensee who owns, receives, acquires, possesses, uses, or transfers calibration reference sources pursuant to the general license authorized in WAC 246-233-020(7) shall:

(a) Maintain a file or log identifying such sources, including nuclide, activity, model and serial numbers, manufacturer, date of receipt, date of transfer, and to whom transferred (where applicable);

(b) Possess at any one time, and at any one location of storage or use, no more than five uCi (0.185 megabecquerels) of Am-241 and five uCi (0.185 megabecquerels) of Pu and five uCi (0.185 megabecquerels) of Ra-226 in such sources;

(c) Store such source(s), except when the source(s) is being used, in a closed container adequately designed and constructed to contain Americium-241, Plutonium, or Radium 226 which might otherwise escape during storage; and

(d) Not use such source(s) for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(2) Any licensee who receives, possesses, or uses calibration and reference standards pursuant to the group licensing provisions of WAC 246-235-080 (3)(c):

(a) Shall conduct leak tests in accordance with WAC 246-235-080 (3)(d);

(b) Shall follow the radiation safety and handling instructions approved by the department, the United States Nuclear Regulatory Commission, and agreement state or a licensing state and furnished by the manufacturer on the label attached to the source, or permanent container thereof, or in the leaflet or brochure that accompanies the source, and maintain such instruction in a legible and conveniently available form; and

(c) Shall conduct a quarterly physical inventory to account for all sources received and possessed. Records of the inventory shall be maintained for inspection by the department, and shall include, but not be limited to, the quantities and kinds of radioactive material, the serial number of each source, location of sources, the initials or name of the person performing the inventory, and the date of inventory.

(3) Any licensee authorized for medical Group I, II, or III is also authorized to receive, use, possess, store, transfer and/or dispose of sealed sources containing Cobalt-57 in amounts not exceeding 22 millicuries (814 megabecquerels) per source which are designed, intended, and used solely for required imaging system or dose calibrator quality assurance tests.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-080, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-170, filed 9/16/83.]

WAC 246-239-090 Instrumentation. (1) Instrumentation used to conduct surveys shall be appropriate for the nuclide(s) and radiation levels present.

(2) Portable and stationary survey instruments shall be calibrated at least annually, with intervals not to exceed five

(2003 Ed.)

calendar quarters, and after any repair. Calibrations shall be done using either the licensee's procedures approved by the department or by a facility specifically licensed to perform the appropriate dose rate or contamination instrument calibrations. Records shall be maintained for inspection by the department.

(3) An operational check utilizing an appropriate check source shall be conducted daily when instruments are used.

(4) Imaging systems shall have a flood performed daily when the system is used. In addition, mobile nuclear medicine services employing imaging systems which are moved from one facility to another shall perform a flood prior to use at each location. Bar phantoms shall be performed weekly. Records of such quality assurance for imaging systems, shall be maintained for inspection by the departments.

(5) Appropriate source(s) for calibration and standardization of dose calibrators shall be used. Dose calibrators shall receive:

(a) Daily constancy checks;

(b) Quarterly linearity tests;

(c) Annual tests for accuracy; accuracy test results which show a variation greater than ten percent from the expected or calculated value shall cause the instrument to be repaired and recalibrated prior to use for assay of patient doses; and

(d) Geometry tests upon installation and following major repair.

(6) The licensee is responsible for proper and timely performance of required quality assurance procedures and tests.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-090, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-190, filed 9/16/83.]

WAC 246-239-100 Radioactive gases. (1) Licensees utilizing radioactive gases, such as Xenon-133 or Krypton-81m, shall have and use a ventilation system adequate for such use, including an approved trap. Radioactive gas shall be disposed only as specifically authorized by the license.

(2) Licensees utilizing radioactive gases shall maintain emissions in accordance with limits specified in chapters 246-221 and 246-247 WAC. Verification shall be documented. Such verification may be made by calculation, air samples, or the use of constant monitoring instrumentation.

(3) Licensees utilizing radioactive gas without benefit of negative air pressure in the use area shall utilize an approved and shielded delivery system and trap. Such traps shall be tested for trapping efficiency at intervals not to exceed those recommended by the trap manufacturer and replaced as recommended by the manufacturer.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-100, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-100, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-34-210, filed 12/11/86; 83-19-050 (Order 2026), § 402-34-210, filed 9/16/83.]

Chapter 246-240 WAC

RADIATION PROTECTION—MEDICAL THERAPY

WAC

246-240-001	Scope.
246-240-010	Definitions.
246-240-015	Policy and procedures for therapy administration.
246-240-020	Interstitial, intracavitary and superficial applications.
246-240-025	Release of individuals containing permanent implants.
246-240-030	Teletherapy.
246-240-040	Special requirements for teletherapy licensees.
246-240-050	Notifications, records, and reports of therapy misadministrations.

WAC 246-240-001 Scope. The provisions of this chapter apply to all licensees who use sealed sources in the healing arts and are in addition to, and not in substitution for, other applicable provisions of these regulations.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-240-001, filed 12/27/90, effective 1/31/91; Order 1084, § 402-32-010, filed 1/14/76; Order 1, § 402-32-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-240-010 Definitions. As used in this chapter, the following definitions apply:

(1) "Authorized user" means a physician who is identified as an authorized user on a department, U.S. Nuclear Regulatory Commission or agreement state license that authorizes the medical use of radioactive material.

(2) "Brachytherapy" means a method of radiation therapy in which sealed sources are utilized to deliver a radiation dose at a distance of up to a few centimeters, by surface, intracavitary, or interstitial application.

(3) "Medical use" means the intentional internal or external administration of radioactive material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

(4) "Prescribed dose" means:

(a) For gamma stereotactic radiosurgery, the total dose as documented in the written directive;

(b) For teletherapy, the total dose and dose per fraction as documented in the written directive; or

(c) For brachytherapy, either the total source strength and exposure time, or the total dose, as documented in the written directive.

(5) "Recordable therapy event" means the administration of:

(a) Radiation without a written directive where a written directive is required;

(b) Radiation where a written directive is required without daily recording of each radiation dose in the appropriate record;

(c) A teletherapy radiation dose when the calculated weekly administered dose exceeds the weekly prescribed dose by fifteen percent or more of the weekly prescribed dose; or

(d) A brachytherapy radiation dose when the calculated administered dose differs from the prescribed dose by more than ten percent of the prescribed dose.

(6) "Teletherapy" means therapeutic irradiation in which the source of radiation is at a distance from the body.

(7) "Therapy misadministration" means the administration of:

(a) A gamma stereotactic radiosurgery radiation dose:
(i) Involving the wrong individual or wrong treatment site; or

(ii) When the calculated total administered dose differs from the total prescribed dose by more than ten percent of the total prescribed dose;

(b) A teletherapy radiation dose:

(i) Involving the wrong individual, wrong mode of treatment, or wrong treatment site;

(ii) When the treatment consists of three or fewer fractions and the calculated total administered dose differs from the total prescribed dose by more than ten percent of the total prescribed dose;

(iii) When the calculated weekly administered dose exceeds the weekly prescribed dose by thirty percent or more of the weekly prescribed dose; or

(iv) When the calculated total administered dose differs from the total prescribed dose by more than twenty percent of the total prescribed dose;

(c) A brachytherapy radiation dose:

(i) Involving the wrong individual, wrong radioisotope, or wrong treatment site (excluding, for permanent implants, seeds that were implanted in the correct site but migrated outside the treatment site);

(ii) Involving a sealed source that is leaking;

(iii) When, for a temporary implant, one or more sealed sources are not removed upon completion of the procedure; or

(iv) When the calculated administered dose to the treatment site differs from the prescribed dose by more than twenty percent of the prescribed dose.

(8) "Written directive" means an order in writing for a specific patient or human research subject, dated and signed by an authorized user prior to the administration of radiation, except as specified in (d) of this subsection, containing the following information:

(a) For gamma stereotactic radiosurgery: Target coordinates, collimator size, plug pattern, and total dose;

(b) For teletherapy: The total dose, dose per fraction, treatment site, and overall treatment period;

(c) For high-dose-rate remote after loading brachytherapy: The radioisotope, treatment site, and total dose; or

(d) For all other brachytherapy, (i) prior to implantation: The radioisotope, number of sources, and source strengths; and (ii) after implantation but prior to completion of the procedure: The radioisotope, treatment site, and total source strength and exposure time (or, equivalently, the total dose).

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-240-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 92-06-008 (Order 245), § 246-240-010, filed 2/21/92, effective 3/23/92.]

WAC 246-240-015 Policy and procedures for therapy administration. (1) Each licensee shall establish and maintain a written program to provide assurance that radioactive material or radiation from radioactive material will be administered as directed by the authorized user. The program must include written policies and procedures to meet the following specific objectives:

(a) That, prior to administration, a written directive is prepared for:

- (i) Any teletherapy radiation dose;
- (ii) Any gamma stereotactic radiosurgery radiation dose;

or

(iii) Any brachytherapy radiation dose. A written revision to an existing written directive may be made for any therapeutic procedure provided the revision is dated and signed by the authorized user prior to the administration of radioactive material or radiation from radioactive material for that therapeutic use. If a delay would jeopardize the patient's health, and the authorized user is not personally present to administer the dose, an oral directive or oral revision to an existing written directive by the authorized user will be acceptable provided the oral directive or oral revision is documented immediately in the patient's chart or record, and the revised written directive is signed by the authorized user within forty-eight hours of the oral revision. Note: A written directive is not required when an authorized user personally assays and administers a dosage, provided the pertinent facts are documented as otherwise required;

(b) That, prior to each administration, the patient's identity is verified by more than one method as the individual named in the written directive;

(c) That final plans of treatment and related calculations for brachytherapy, teletherapy, and gamma stereotactic radiosurgery are in accordance with the respective written directives;

(d) That each administration is in accordance with the written directive; and

(e) That any unintended deviation from the written directive is identified and evaluated, and appropriate action is taken.

(2) The licensee shall:

(a) Develop procedures for and conduct a review of the therapy administration program including, since the last review, an evaluation of:

(i) A representative sample of patient and human research subject administrations;

(ii) All recordable events; and

(iii) All therapy misadministrations to verify compliance with all aspects of the therapy administration program; these reviews shall be conducted at intervals no greater than twelve months;

(b) Evaluate each of these reviews to determine the effectiveness of the therapy administration program and, if required, make modifications to meet the objectives of subsection (1) of this section; and

(c) Retain records of each review, including the evaluations and findings of the review, in an auditable form for three years.

(3) The licensee shall evaluate and respond, within thirty days after the discovery of the recordable therapy event, to each recordable therapy event by:

(a) Assembling the relevant facts including the cause;

(b) Identifying what, if any, corrective action is required to prevent recurrence; and

(c) Retaining a record, in an auditable form, for three years, of the relevant facts and what corrective action, if any, was taken.

(2003 Ed.)

(4) The licensee shall retain:

(a) Each written directive (provided, however, that such written directive is not required if the dose is both personally assayed and administered by the authorized user); and

(b) A record of each administered radiation dose where a written directive is required in subsection (1)(a) of this section, in an auditable form for three years after the date of the administration.

(5) The licensee may make modifications to the program to increase the program's efficiency provided the program's effectiveness is not decreased.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-240-015, filed 6/8/98, effective 7/9/98; 95-01-108, § 246-240-015, filed 12/21/94, effective 1/21/95.]

WAC 246-240-020 Interstitial, intracavitary and superficial applications. (1) Accountability, storage, and handling.

(a) Except as otherwise specifically authorized by the department, each licensee shall provide accountability of sealed sources and shall keep a record of the issue and return of all sealed sources to their place of storage.

(b) Each licensee shall conduct a quarterly physical inventory to account for all sources and devices received and possessed. Records of the inventories shall be maintained for inspection by the department and shall include the activities, radionuclide(s), and serial numbers of radioactive sources, location of sources and devices, the date of the inventory, and the initials or name of the person performing the inventory.

(c) Each licensee shall follow the radiation safety and handling instructions approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and furnished by the manufacturer on the label attached to the source, device or permanent container thereof, or in the leaflet or brochure which accompanies the source or device, and maintain such instruction in a legible and conveniently available form.

(d) Each licensee shall assure that sealed therapy sources are not opened/breached, or physically modified while in the licensee's possession unless specifically authorized by license condition.

(2) Testing sealed sources for leakage and contamination.

(a) All sealed sources containing more than 100 microcuries (3.7 megabecquerels) of radioactive material with a half-life greater than thirty days, except Iridium-192 seeds encased in nylon ribbon, shall be tested for contamination and/or leakage at intervals not to exceed six months or at such other intervals as are approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and described by the manufacturer on the label attached to the source, device, or permanent container thereof, or in the leaflet or brochure which accompanies the source or device. Each source or device shall be so tested prior to its first use unless the supplier furnishes a certificate that the source or device has been so tested within six months prior to the transfer.

(b) Leak tests shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample or in the case of radium, the escape of

[Title 246 WAC—p. 379]

radon at the rate of 0.001 microcurie (37 becquerels) per twenty-four hours. The test sample shall be taken from the source or from the surfaces of the device in which the source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries or becquerels and maintained for inspection by the department.

(c) Any leak test conducted pursuant to (a) of this subsection which reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination or in the case of radium, the escape of radon at the rate of 0.001 microcurie (37 becquerels) per twenty-four hours, shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the source from use and cause it to be decontaminated and repaired or to be disposed of in accordance with department regulations. A report shall be filed within five days of the test with the department, describing the equipment involved, the test results, and the corrective action taken.

(3) Radiation surveys.

(a) The maximum exposure rate radiation level at a distance of one meter from the patient in whom brachytherapy sources have been inserted shall be determined by measurement or calculation. This radiation level shall be entered on the patient's chart and other signs as required under subsection (4) of this section.

(b) The exposure rate radiation levels in the patient's room and the surrounding area shall be determined, recorded, and maintained for inspection by the department.

(c) The licensee shall assure that patients treated with Cobalt-60, Cesium-137, Iridium-192, Radium-226, or any other nonpermanent implants, including High Dose Rate (HDR), Medium Dose Rate (MDR), or Low Dose Rate (LDR) therapy systems used on an in-patient or out-patient basis, remain hospitalized until a source count and a radiation survey of the patient and the patient's room confirm that all implants have been removed and are accounted for immediately after removing the last source.

(4) Signs and records.

(a) In addition to the requirements of WAC 246-221-120, the bed, cubicle, or room of the hospital brachytherapy patient shall be marked with a sign indicating the presence of brachytherapy sources. This sign shall incorporate the radiation symbol and specify the radionuclide, the activity, date, and the individual(s) to contact for radiation safety instructions.

(b) The following information shall be included for the duration of the patient's treatment in the patient's official hospital medical record/chart:

(i) The radionuclide administered, number of sources, activity in millicuries or becquerels and time and date of administration;

(ii) The exposure rate at one meter, the time the determination was made, and by whom;

(iii) The radiation symbol; and

(iv) The precautionary instructions necessary to assure that the exposure of individuals does not exceed that permitted under WAC 246-221-010.

(c) Information required by subsection (4)(b)(i) and (ii) of this section shall be retained for review by the department.

(d) A record of the survey conducted to confirm that all sources have been removed from a patient or human research subject prior to release shall be retained for three years. Each record shall include the date of the survey, the name of the patient or human research subject, the dose rate from the patient or human research subject expressed as millirem per hour and measured at one meter from the patient or human research subject, the survey instrument used, and the initials of the individual who made the survey.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-240-020, filed 6/8/98, effective 7/9/98; 94-06-017, § 246-240-020, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-240-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-240-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-32-020, filed 12/11/86; 83-19-050 (Order 2026), § 402-32-020, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-32-020, filed 12/8/80; Order 1084, § 402-32-020, filed 1/14/76; Order 1, § 402-32-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-240-025 Release of individuals containing permanent implants. (1) The licensee may authorize the release from its control of any individual who has permanent implants containing radioactive material if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 millisieverts (0.5 rem).

(2) The licensee shall provide the released individual with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 millisievert (0.1 rem).

(3) The licensee shall maintain a record of the basis for authorizing the release of an individual, for three years after the date of release, if the total effective dose equivalent is calculated by:

- (a) Using an occupancy factor less than 0.25 at 1 meter;
- or
- (b) Considering the shielding by tissue.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-240-025, filed 6/8/98, effective 7/9/98.]

WAC 246-240-030 Teletherapy. (1) Equipment.

(a) The housing shall be so constructed that, at one meter from the source, the maximum exposure rate does not exceed ten milliroentgens per hour when the beam control mechanism is in the "off" position. The average exposure rate measured at a representative number of points about the housing, each one meter from the source, shall not exceed two milliroentgens per hour.

(b) For teletherapy equipment installed after the effective date of these regulations, the leakage radiation measured at one meter from the source when the beam control mechanism is in the "on" position shall not exceed 0.1 percent of the useful beam exposure rate.

(c) Adjustable or removable beam-defining diaphragms shall allow transmission of not more than five percent of the useful beam exposure rate.

(d) The beam control mechanism shall be of a positive design capable of acting in any orientation of the housing for which it is designed to be used. In addition to an automatic closing device, the mechanism shall be designed so that it can be manually returned to the "off" position with a minimum risk of exposure.

(e) The closing device shall be so designed as to return automatically to the "off" position in the event of any breakdown or interruption of the activating force and shall stay in the "off" position until activated from the control panel.

(f) Beam control mechanisms.

(i) When any door to the treatment room is opened, the beam control mechanism shall automatically and rapidly restore the unit to the "off" position and cause it to remain there until the unit is reactivated from the control panel.

(ii) Beam control mechanisms shall be tested at intervals not to exceed three months for proper function. Records of these tests shall be maintained for inspection by the department.

(g) There shall be at the housing and at the control panel a warning device that plainly indicates whether the beam is on or off.

(h) The equipment shall be provided with a locking device to prevent unauthorized use.

(i) The control panel shall be provided with a timer that automatically terminates the exposure after a preset time.

(j) Provision shall be made to permit continuous observation of patients during irradiation.

(k) The treatment room shall be equipped with a permanent radiation monitor which shall:

(i) Continuously monitor the condition of the teletherapy beam;

(ii) Provide a continuous visible signal to the teletherapy unit operator and any person entering the treatment room, of a unit malfunction;

(iii) Each radiation monitor must be equipped with an emergency power supply separate from the power supply to the teletherapy unit. This emergency power supply may be a battery system;

(iv) Each radiation monitor must be tested for proper operation each day before the teletherapy unit is used for treatment of patients; and

(v) If a radiation monitor is inoperable for any reason, any person entering the teletherapy room shall use a properly operating portable survey instrument or audible alarm personal dosimeter to monitor for any malfunction of the source exposure mechanism that may have resulted in an exposed or partially exposed source. Survey instruments or dosimeters must be tested daily before use.

(2) **Operation.** Except in the emergency condition when a source fails to retract, no individual shall be in the treatment room during irradiation unless that individual is the patient. Mechanical restraining or supporting devices shall be used for positioning the patient, if necessary.

(3) **Testing for leakage and contamination.** Teletherapy sources shall be tested for leakage and contamination in accordance with the procedures described in WAC 246-240-

020(2). Tests of leakage may be made by wiping accessible surfaces of the housing port or collimator while the source is in the "off" position and measuring these wipes for transferred contamination.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-240-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-240-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-32-030, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-32-030, filed 12/8/80; Order 1084, § 402-32-030, filed 1/14/76; Order 1, § 402-32-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-240-040 Special requirements for teletherapy licensees. (1) Requirement to perform full calibration requirements of teletherapy units.

(a) Any licensee authorized under WAC 246-235-080 to use teletherapy units for treating humans shall cause full calibration measurements to be performed on each teletherapy unit:

(i) Prior to the first use of the unit for treating humans:

(A) Whenever spot-check measurements indicate that the output value differs by more than five percent from the value obtained at the last full calibration corrected mathematically for physical decay;

(B) Following replacement of the radiation source or following reinstallation of the teletherapy unit in a new location;

(C) Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and

(D) At intervals not exceeding one year.

(b) Full calibration measurements required by (a) of this subsection shall include determination of:

(i) The exposure rate or dose rate to an accuracy within ± 3 percent for the range of field sizes and for the range of distances (or for the axis distance) used in radiation therapy;

(ii) The congruence between the radiation field and the field indicated by the light beam localizing device;

(iii) The uniformity of the radiation field and its dependence upon the orientation of the useful beam;

(iv) Timer accuracy; and

(v) The accuracy of all distance measuring devices used for treating humans.

(c) Full calibration measurements shall be made in accordance with the procedures recommended by the Scientific Committee on Radiation Dosimetry of the American Association of Physicists in Medicine (Physics in Medicine and Biology, Vol. 16, No. 3, 1971, pp. 379-386).¹

(d) The exposure rate or dose rate values determined in (b)(i) of this subsection shall be corrected mathematically for physical decay for intervals not exceeding one month for units employing a Cobalt-60 source and six months for units employing a Cesium-137 source.

(e) Full calibration measurements required by (a) of this subsection and physical decay corrections required by (d) of this subsection shall be performed by an expert qualified by training and experience in accordance with subsection (4) of this section.

(2) Requirement to perform periodic spot-check measurements of teletherapy units.

(a) Any licensee authorized under WAC 246-235-080(4) to use teletherapy units for treating humans shall cause spot-check measurements to be performed on each teletherapy unit at intervals not exceeding one month.

(b) Spot-check measurements required by (a) of this subsection shall include determination of:

(i) Timer accuracy;

(ii) The congruence between the radiation field and the field indicated by the light beam localizing device;

(iii) The accuracy of all distance measuring devices used for treating humans;

(iv) The exposure rate, dose rate, or a quantity related in a known manner to these rates for one typical set of operating conditions; and

(v) The difference between the measurement made in (b) of this subsection and the anticipated output, expressed as a percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay).

(c) Spot-check measurements required by (a) of this subsection shall be performed in accordance with procedures established by an expert qualified by training and experience in accordance with subsection (4) of this section. (A qualified expert need not actually perform the spot-check measurements.) If a qualified expert does not perform the spot-check measurements, the results of the spot-check measurements shall be reviewed by a qualified expert within fifteen days.

(3) Requirement to calibrate instruments used for full calibration and spot-check measurements.

(a) Full calibration measurements required by subsection (1) of this section shall be performed using a dosimetry system that has been calibrated by the National Bureau of Standards or by a Regional Calibration Laboratory accredited by the American Association of Physicists in Medicine. The dosimetry system shall have been calibrated within the previous two years and after any servicing that may have affected system calibration.

(b) Spot-check measurements required by subsection (2) of this section shall be performed using a dosimetry system that has been calibrated in accordance with (a) of this subsection. Alternatively, a dosimetry system used solely for spot-check measurements may be calibrated by direct intercomparison with a system that has been calibrated in accordance with (a) of this subsection. This alternative calibration method shall have been performed within the previous one year and after each servicing that may have affected system calibration. Dosimetry systems calibrated by this alternative method shall not be used for full calibration measurements. The use of thermoluminescent dosimeter does not satisfy the requirements of this section.

(4) **Qualified expert.** The licensee shall determine if a person is an expert qualified by training and experience to calibrate a teletherapy unit and establish procedures for (and review the results of) spot-check measurements. The licensee shall determine that the qualified expert:

(a) Is certified by the American Board of Radiology in Therapeutic Radiological Physics, Radiological Physics, Roentgen-Ray and Osmin-Ray Physics, or X-ray and Radium Physics; or

(b) Has the following minimum training and experience:

(i) A master's or doctor's degree in physics, biophysics, radiological physics or health physics;

(ii) One year of full-time training in therapeutic radiological physics; and

(iii) One year of full-time experience in a radiotherapy facility including personal calibration and spot-check of at least one teletherapy unit.

Note: The requirements of subsection (4) of this section are in addition to those set forth under "Qualified expert" in WAC 246-220-010.

(5) Records.

The licensee shall maintain, for inspection by the department, records of the measurements, tests, corrective actions, and instrument calibrations made under subsections (1) and (2) of this section and records of the licensee's evaluation of the qualified expert's training and experience made under subsection (4) of this section.

(a) Records of (i) full calibration measurements and (ii) calibration of instruments used to make these measurements shall be preserved for five years after completion of the full calibration.

(b) Records of (i) spot-check measurements and corrective actions and (ii) calibration of instruments used to make spot-check measurements shall be preserved for two years after completion of the spot-check measurements and corrective actions.

(c) Records of the licensee's evaluation of the qualified expert's training and experience shall be preserved for five years after the qualified expert's last performance of a full calibration of the licensee's teletherapy unit.

(6) Inspection and servicing of the source exposure mechanism.

(a) Each teletherapy machine shall be fully inspected and serviced during source replacement or at intervals not to exceed five years, whichever comes first, to assure proper function of the source exposure mechanism. This inspection and servicing must be performed by persons specifically authorized to do so by the department, the United States Nuclear Regulatory Commission, or an agreement state, and a complete written report of the inspection and servicing must be kept on file for review by the department.

(b) The following shall be performed only by persons specifically authorized by the department, the United States Nuclear Regulatory Commission, or an agreement state to perform such services:

(i) Installation, inspection, servicing, relocation, or removal of teletherapy units containing sources.

(ii) Source exchange.

(iii) Any maintenance or repair operations on a teletherapy unit involving work on the source drawer, the shutter, or other mechanism that could expose the source, reduce the shielding around the source or compromise the safety of the unit and result in increased radiation levels.

¹ Licensees that have their teletherapy units calibrated by persons who do not meet these criteria for minimum training and experience may require a license amendment excepting them from the requirements of subsection (4) of this section. The request should include the name of the proposed qualified expert, a description of his or her training and experience including information similar to that specified by subsection (4) of this section and a report of at least one calibration and spot-check program based on mea-

surements personally made by the proposed expert within the last ten years and written endorsement of the technical qualifications of the proposed expert from personal knowledge by a physicist certified by the American Board of Radiology in one of the specialties listed therein.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-240-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-240-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-32-100, filed 12/11/86; 83-19-050 (Order 2026), § 402-32-100, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-32-100, filed 12/8/80.]

WAC 246-240-050 Notifications, records, and reports of therapy misadministrations. (1) The licensee shall notify by telephone the division of radiation protection at (206) 682-5327 no later than the next calendar day after the discovery of a therapy misadministration.

(2) The licensee also shall notify the referring physician and the individual receiving the therapy misadministration (or the individual's responsible relative or guardian) of the therapy misadministration not later than twenty-four hours after its discovery, unless the referring physician personally informs the licensee either that the physician will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or the patient receiving the therapy misadministration cannot be reached within twenty-four hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the therapy misadministration, because of any delay in notification.

(3) The licensee shall submit a written report to the department within fifteen days after discovery of the therapy misadministration. The written report must include the licensee's name; the prescribing physician's name; a brief description of the therapy misadministration; why it occurred; the effect on the individual; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the licensee notified the individual, and if not, why not, and if there was notification, what information was provided. The report shall not include the individual's name or other information that could lead to identification of the individual. To meet the requirements of this section, the notification of the individual receiving the therapy misadministration may be made instead to that individual's responsible relative or guardian, when appropriate.

(4) If the individual was notified, the licensee shall also furnish, within fifteen days after discovery of the therapy misadministration, a written report to the individual by sending either:

(a) A copy of the report that was submitted to the department; or

(b) A brief description of both the therapy misadministration and the consequences, as they may affect the individual, and a statement informing the individual that the report submitted to the department can be obtained from the licensee.

(5) Each licensee shall retain a record of each therapy misadministration for five years. The record must contain the

names of all individuals involved (including the prescribing physician, allied health personnel, the individual who received the therapy misadministration, and that individual's referring physician), the individual's Social Security number or identification number if one has been assigned, a brief description of the therapy misadministration, why it occurred, the effect on the individual, improvements needed to prevent recurrence, and the actions taken to prevent recurrence.

(6) Aside from the notification requirement, nothing in this section affects any rights or duties of licensees and physicians in relation to each other, to individual's receiving therapy misadministrations, or to that individual's responsible relatives or guardians.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-240-050, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-240-050, filed 2/21/92, effective 3/23/92.]

Chapter 246-243 WAC

RADIATION PROTECTION—INDUSTRIAL RADIOGRAPHY

WAC

246-243-001	Purpose.
246-243-010	Scope.
246-243-020	Definitions.
246-243-030	Conducting industrial radiography operations.
246-243-040	Equipment performance requirements.
246-243-042	Labeling, storage, and transportation.
246-243-044	Records of receipt and transfer of sealed sources.
246-243-047	Radiation safety officer for industrial radiography.
246-243-050	Internal inspection program and training.
246-243-060	Locking of radiographic exposure devices.
246-243-070	Storage precautions.
246-243-080	Radiation survey instruments.
246-243-090	Leak testing, repair, tagging, opening, modification, and replacement of sealed sources.
246-243-100	Quarterly inventory.
246-243-110	Utilization logs.
246-243-120	Inspection and maintenance of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments.
246-243-130	Limitations—Personal radiation safety requirements for radiographers and radiographers' assistants.
246-243-140	Operating and emergency procedures.
246-243-141	Copies of operating and emergency procedures.
246-243-150	Personnel monitoring control.
246-243-160	Supervision of radiographers' assistants.
246-243-170	Security—Precautionary procedures in radiographic operations.
246-243-180	Posting.
246-243-190	Radiation surveys and survey records.
246-243-195	Reporting.
246-243-200	Records required at temporary job sites.
246-243-203	Form of records.
246-243-205	Temporary job site notification.
246-243-220	Special requirements for permanent radiographic installation.
246-243-230	Appendix A—Minimum subjects to be covered in training radiographers.
246-243-240	Appendix B—General guidelines for inspection of radiography equipment.
246-243-250	Appendix C—Radiographer certification.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-243-210	Special requirements for enclosed radiography. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-210, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-210, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order
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121), recodified as § 246-243-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-155, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-155, filed 12/8/80; Order 1084, § 402-36-155, filed 1/14/76.] Repealed by 00-08-013, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050.

WAC 246-243-001 Purpose. The regulations in this chapter establish radiation safety requirements for persons utilizing sources of radiation for industrial radiography. The requirements of this part are in addition to and not in substitution for the other requirements of these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-001, filed 12/27/90, effective 1/31/91; Order 1084, § 402-36-010, filed 1/14/76; Order 1, § 402-36-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-010 Scope. The regulations in this chapter apply to all licensees who use sources of radiation for industrial radiography: Provided, however, That nothing in this part shall apply to the use of sources of radiation in the healing arts.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-010, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-010, filed 12/27/90, effective 1/31/91; Order 1084, § 402-36-020, filed 1/14/76; Order 1, § 402-36-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-020 Definitions. As used in this part:

(1) "Annual refresher safety training" means a review conducted or provided by the licensee for its employees on radiation safety aspects of industrial radiography. The review may include, as appropriate, the results of internal inspections, new procedures or equipment, new or revised regulations, accidents or errors that have been observed, and should also provide opportunities for employees to ask safety questions.

(2) "Associated equipment" means equipment that is used in conjunction with a radiographic exposure device to make radiographic exposures that drives, guides, or comes in contact with the source, (e.g., guide tube, control tube, control (drive) cable, removable source stop, "J" tube and collimator) when it is used as an exposure head.

(3) "Certifying entity" means an independent certifying organization meeting the requirements in WAC 246-243-250 Appendix C or an agreement state meeting the requirements in WAC 246-243-250 Appendix C, subsections (2) and (3).

(4) "Collimator" means a radiation shield that is placed on the end of the guide tube or directly onto a radiographic exposure device to restrict the size of the radiation beam when the sealed source is cranked into position to make a radiographic exposure.

(5) "Control (drive) cable" means the cable that is connected to the source assembly and used to drive the source to and from the exposure location.

(6) "Control drive mechanism" means a device that enables the source assembly to be moved to and from the exposure device.

(7) "Control tube" means a protective sheath for guiding the control cable. The control tube connects the control drive mechanism to the radiographic exposure device.

(8) "Exposure head" means a device that locates the gamma radiography sealed source in the selected working position. (An exposure head is also known as a source stop.)

(9) "Field station" means a facility where licensed material may be stored or used and from which equipment is dispatched.

(10) "Guide tube (projection sheath)" means a flexible or rigid tube (i.e., "J" tube) for guiding the source assembly and the attached control cable from the exposure device to the exposure head. The guide tube may also include the connections necessary for attachment to the exposure device and to the exposure head.

(11) "Hands-on experience" means experience in all of those areas considered to be directly involved in the radiography process.

(12) "Independent certifying organization" means an independent organization that meets all of the criteria of WAC 246-243-250 Appendix C.

(13) "Industrial radiography" (radiography) means the examination of the macroscopic structure of materials by nondestructive methods utilizing sources of radiation to make radiographic images. Industrial radiography as used in this chapter does not include well logging operations.

(14) "Lay-barge radiography" means industrial radiography performed on any water vessel used for laying pipe.

(15) "Offshore platform radiography" means industrial radiography conducted from a platform over a body of water.

(16) "Permanent radiographic installation" means an enclosed shielded room, cell or vault, not located at a temporary job site, in which radiography is performed, regardless of ownership.

(17) "Practical examination" means a demonstration through practical application of the safety rules and principles in industrial radiography including use of all appropriate equipment and procedures.

(18) "Radiation safety officer for industrial radiography" means an individual with the responsibility for the overall radiation safety program on behalf of the licensee and who meets the requirements of WAC 246-243-047.

(19) "Radiographer" means any individual who performs or who, in attendance at the site where sources of radiation are being used, personally supervises industrial radiographic operations and who is responsible to the licensee for assuring compliance with the requirements of these regulations and all license conditions.

(20) "Radiographer certification" means written approval received from a certifying entity stating that an individual has satisfactorily met certain established radiation safety, testing, and experience criteria.

(21) "Radiographer's assistant" means any individual who, under the personal supervision of a radiographer, uses sources of radiation, related handling tools, or radiation survey instruments in industrial radiography.

(22) "Radiographic exposure device" means any instrument containing a sealed source fastened or contained therein, in which the sealed source or shielding thereof may be moved, or otherwise changed, from a shielded to unshielded position for purposes of making a radiographic exposure.

(23) "Radiographic operations" means all activities associated with the presence of radioactive sources in a radiographic exposure device during use of the device or transport (except when being transported by a common or contract carrier), to include surveys to confirm the adequacy of boundaries, setting up equipment and any activity inside restricted area boundaries.

(24) "S-tube" means a tube through which the radioactive source travels when inside a radiographic exposure device.

(25) "Shielded position" means the location within the radiographic exposure device or source changer where the sealed source is secured and restricted from movement.

(26) "Source assembly" means an assembly that consists of the sealed source and a connector that attaches the source to the control cable. The source assembly may also include a stop ball used to secure the source in the shielded position.

(27) "Source changer" means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those also used for transporting and storage of sealed sources.

(28) "Storage area" means any location, facility, or vehicle which is used to store or to secure a radiographic exposure device, a storage container, or a sealed source when it is not in use and which is locked or has a physical barrier to prevent accidental exposure, tampering with, or unauthorized removal of the device, container, or source.

(29) "Storage container" means a container in which sealed sources are secured and stored.

(30) "Temporary job site" means a location where radiographic operations are conducted and where licensed material may be stored other than those location(s) of use authorized on the license.

(31) "Underwater radiography" means industrial radiography performed when the radiographic exposure device and/or related equipment are beneath the surface of the water.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-020, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-020, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-025, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-025, filed 12/8/80; Order 1084, § 402-36-025, filed 1/14/76.]

WAC 246-243-030 Conducting industrial radiography operations. (1) Whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of WAC 246-243-130(2) (radiographer's assistant). The additional qualified individual shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Radiography may not be performed if only one qualified individual is present.

(2) All radiographic operations conducted at locations of use authorized on the license must be conducted in a permanent radiographic installation, unless specifically authorized by the department.

(2003 Ed.)

(3) Offshore platform, lay-barge, and/or underwater radiography shall be performed only by licensees whose license specifically authorizes such activity. Such operations fall under the jurisdiction of the United States Nuclear Regulatory Commission when conducted outside of the territorial waters of the state of Washington.

(4) Licensees will have until January 1, 2001, to meet the requirement for having two qualified individuals present at locations other than a permanent radiographic installation as specified in subsection (1) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-030, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-027, filed 9/16/83.]

WAC 246-243-040 Equipment performance requirements. Equipment used in industrial radiography operations must meet the following minimum criteria:

(1)(a) Each radiographic exposure device, source assembly or sealed source, and all associated equipment must meet the requirements specified in American National Standards Institute, N432-1980 *"Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography,"* (published as NBS Handbook 136, issued January 1981). Copies of the document are available for inspection at the Department of Health, Division of Radiation Protection, Olympia, Washington.

(b) Engineering analysis may be submitted by an applicant or licensee to demonstrate the applicability of previously performed testing on similar individual radiography equipment components. Upon review, the department may find this an acceptable alternative to actual testing of the component pursuant to the above referenced standard.

(c) Notwithstanding (a) of this subsection, equipment used in industrial radiographic operations need not comply with § 8.9.2(c) of the Endurance Test in American National Standards Institute N432-1980, if the prototype equipment has been tested using a torque value representative of the torque that an individual using the radiography equipment can realistically exert on the lever or crankshaft of the drive mechanism.

(2) In addition to the requirements specified in subsection (1) of this section, the following requirements apply to radiographic exposure devices, source changers, source assemblies and sealed sources.

(a) The licensee shall ensure that each radiographic exposure device has attached to it a durable, legible, clearly visible label bearing the:

- (i) Chemical symbol and mass number of the radionuclide in the device;
- (ii) Activity and the date on which this activity was last measured;
- (iii) Model (or product code) and serial number of the sealed source;
- (iv) Manufacturer's identity of the sealed source; and
- (v) Licensee's name, address, and telephone number.

(b) Radiographic exposure devices intended for use as Type B transport containers must meet the applicable requirements of 10 CFR Part 71.

[Title 246 WAC—p. 385]

(c) Modification of radiographic exposure devices, source changers, and source assemblies and associated equipment is prohibited, unless the design of any replacement component, including source holder, source assembly, controls or guide tubes would not compromise the design safety features of the system.

(3) In addition to the requirements specified in subsections (1) and (2) of this section, the following requirements apply to radiographic exposure devices, source assemblies, and associated equipment that allow the source to be moved out of the device for radiographic operations or to source changers.

(a) The coupling between the source assembly and the control cable must be designed in such a manner that the source assembly will not become disconnected if cranked outside the guide tube. The coupling must be such that it can not be unintentionally disconnected under normal and reasonably foreseeable abnormal conditions.

(b) The device must automatically secure the source assembly when it is cranked back into the fully shielded position within the device. The securing system may only be released by means of a deliberate operation on the exposure device.

(c) The outlet fittings, lock box, and drive cable fitting on each radiographic exposure device must be equipped with safety plugs or covers which must be installed during storage and transportation to protect the source assembly from water, mud, sand, or other foreign matter.

(d)(i) Each sealed source or source assembly must have attached to it or engraved on it, a durable, legible, visible label with the words: "DANGER—RADIOACTIVE."

(ii) The label may not interfere with the safe operation of the exposure device or associated equipment.

(e) The guide tube must be able to withstand a crushing test that closely approximates the crushing forces that are likely to be encountered during use, and be able to withstand a kinking resistance test that closely approximates the kinking forces likely to be encountered during use.

(f) Guide tubes must be used when moving the source out of the device.

(g) An exposure head or similar device designed to prevent the source assembly from passing out of the end of the guide tube must be attached to the outermost end of the guide tube during radiographic operations.

(h) The guide tube exposure head connection must be able to withstand the tensile test for control units specified in ANSI N432-1980.

(i) Source changers must provide a system for ensuring that the source will not be accidentally withdrawn from the changer when connecting or disconnecting the drive cable to or from a source assembly.

(4) All radiographic exposure devices and associated equipment in use after January 1, 1998, must comply with the requirements of this section.

(5) The maximum exposure rate limits for storage containers and source changers with the sealed source in the shielded position are:

(a) 2 millisieverts (200 millirem) per hour at any exterior surface; and

(b) 0.1 millisieverts (10 millirem) per hour at one meter from any exterior surface.

[Statutory Authority: RCW 70.98.050. 99-05-012, § 246-243-040, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-243-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-030, filed 12/8/80; Order 1084, § 402-36-030, filed 1/14/76; Order 1, § 402-36-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-042 Labeling, storage, and transportation. (1) The licensee may not use a source changer or a container to store licensed material unless the source changer or the storage container has securely attached to it a durable, legible, and clearly visible label bearing the standard trefoil radiation caution symbol in conventional colors, i.e., magenta, purple or black on a yellow background, having a minimum diameter of 25 mm, and the wording:

CAUTION (or "DANGER")
RADIOACTIVE MATERIAL
NOTIFY CIVIL AUTHORITIES
(or "NAME OF COMPANY")

(2) The licensee may not transport licensed material unless the material is packaged, and the package is labeled, marked, and accompanied with appropriate shipping papers in accordance with regulations set out in 10 CFR Part 71.

(3) Locked radiographic exposure devices and storage containers must be physically secured to prevent tampering or removal by unauthorized personnel. The licensee shall store licensed material in a manner which will minimize danger from explosion or fire.

(4) The licensee shall lock and physically secure the transport package containing licensed material in the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-042, filed 3/24/00, effective 4/24/00.]

WAC 246-243-044 Records of receipt and transfer of sealed sources. (1) Each licensee shall maintain records showing the receipts and transfers of sealed sources and of devices using depleted uranium (DU) for shielding and retain each record for three years after it is made.

(2) These records must include the date, shipper or destination, the name of the individual making the record, radio-nuclide, number of becquerels (curies) or mass (for DU), and manufacturer, model, and serial number of each sealed source and/or device, as appropriate.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-044, filed 3/24/00, effective 4/24/00.]

WAC 246-243-047 Radiation safety officer for industrial radiography. The radiation safety officer (RSO) shall ensure that radiation safety activities are being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensee's program.

(1) The minimum qualifications, training, and experience for RSOs for industrial radiography are as follows:

(a) Completion of the training and testing requirements of WAC 246-243-130(1);

(b) Two thousand hours of hands-on experience as a qualified radiographer in industrial radiographic operations utilizing sealed radioactive material; and

(c) Formal training in the establishment and maintenance of a radiation protection program.

(2) The department will consider alternatives when the RSO has appropriate training and/or experience in the field of ionizing radiation, and in addition, has adequate formal training with respect to the establishment and maintenance of a radiation safety protection program.

(3) The specific duties and authorities of the RSO include, but are not limited to:

(a) Establishing and overseeing all operating, emergency, and ALARA procedures as required by chapter 246-221 WAC, and reviewing them regularly to ensure that the procedures in use conform to current chapter 246-221 WAC requirements, conform to other department regulations and to the license conditions;

(b) Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;

(c) Ensuring that required radiation surveys and leak tests are performed and documented in accordance with the regulations, including any corrective measures when levels of radiation exceed established limits;

(d) Ensuring that personnel monitoring devices are calibrated and used properly by occupationally exposed personnel, that records are kept of the monitoring results, and that timely notifications are made as required by WAC 246-221-260; and

(e) Ensuring that operations are conducted safely and to assume control for instituting corrective actions including stopping of operations when necessary.

(4) The licensee will have until January 1, 2001, to meet the requirements of subsection (1) or (2) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-047, filed 3/24/00, effective 4/24/00.]

WAC 246-243-050 Internal inspection program and training. (1) Each licensee shall conduct the internal inspection of job performance required by WAC 246-235-084 at intervals not to exceed six months. Except as provided in subsection (1)(d) of this section, the radiation safety officer (RSO) or designee shall conduct an inspection program of the job performance of each radiographer and radiographer's assistant to ensure that the department's regulations, license requirements, and the licensee's operating and emergency procedures are followed. The inspection program shall:

(a) Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals not to exceed six months; and

(b) Provide that, if a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than six months since the last inspection, the radiographer must demonstrate knowledge of the training requirements of WAC 246-243-130 (1)(c) and the radiographer's assistant must redemonstrate knowledge of the training

(2003 Ed.)

requirements of WAC 246-243-130 (2)(b) by a practical examination before these individuals can next participate in a radiographic operation.

(c) The department may consider alternatives in situations where the individual serves as both radiographer and RSO.

(d) In operations where a single individual serves as both radiographer and RSO, and performs all radiography operations, an inspection program is not required.

(2) The licensee shall provide annual refresher safety training for each radiographer and radiographer's assistant at intervals not to exceed twelve months.

(3) Each licensee shall maintain the following records for three years after the record is made:

(a) For semi-annual inspection of job performance, the record shall include:

(i) A list of the items checked; and

(ii) Any noncompliances observed by the RSO;

(b) For annual refresher safety training, the record shall include:

(i) A list of the topics discussed;

(ii) The dates the training was conducted; and

(iii) Names of the instructors and attendees.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-050, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-243-050, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-035, filed 9/16/83.]

WAC 246-243-060 Locking of radiographic exposure devices. (1) Each radiographic exposure device shall be provided with a lock or outerlocked container designed to prevent unauthorized or accidental production of radiation or removal or exposure of a sealed source and shall be locked when returned to the shielded position at all times. If it is a keyed-lock, the key shall be removed at all times when not under the direct surveillance of a radiographer or a radiographer's assistant except at permanent radiographic installations as stated in WAC 246-243-170. In addition, during radiographic operations the sealed source assembly shall be locked in the shielded position each time the source is returned to that position.

(2) Each sealed source storage container and source changer shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. Storage containers and source changers shall be kept locked (and if a keyed-lock, with the key removed at all times) when containing sealed sources except when under the direct surveillance of a radiographer or a radiographer's assistant.

(3) Radiographic exposure devices, source changers, and storage containers, prior to being moved from one location to another and also prior to being secured at a given location, shall be locked and surveyed to assure that the sealed source is in the shielded position.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-060, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121),

recodified as § 246-243-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-040, filed 12/8/80; Order 1084, § 402-36-040, filed 1/14/76; Order 1, § 402-36-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-070 Storage precautions. (1) Locked radiographic exposure devices and storage containers shall be physically secured to prevent tampering or removal by unauthorized personnel.

(2) At least one calibrated and operable radiation survey instrument shall be available at the storage area whenever a radiographic exposure device, a storage container, or source is being placed in storage.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-050, filed 12/8/80; Order 1084, § 402-36-050, filed 1/14/76; Order 1, § 402-36-050, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-080 Radiation survey instruments. (1) The licensee shall maintain sufficient calibrated and operable radiation survey instruments at each location where radioactive material is present to make physical radiation surveys as required by this part and chapter 246-221 WAC. Instrumentation required by this section shall be capable of measuring a range from 0.02 millisieverts (2 millirems) per hour through 0.01 sievert (1 rem) per hour.

(2) Each radiation survey instrument shall be calibrated:

(a) At intervals not to exceed six months and after each instrument servicing except for battery changes;

(b) Such that accuracy within ± 20 percent of the calibration source can be demonstrated at each point checked; and

(c) For linear scale instruments, at two points located approximately one-third and two-thirds of full scale on each scale; for logarithmic scale instruments, at mid-range of each decade; and for digital instruments at three points between 0.02 and 10 millisieverts (2 and 1000 millirems) per hour.

(3) Records shall be maintained of these calibrations for three years after the calibration date for inspection by the department.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-080, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-060, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-060, filed 12/8/80; Order 1084, § 402-36-060, filed 1/14/76; Order 1, § 402-36-060, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-090 Leak testing, repair, tagging, opening, modification, and replacement of sealed sources.

(1) The replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing, repair, tagging, opening, or any other modification of any sealed source shall be performed only by persons specifically authorized to do so by the department, the United States Nuclear Regulatory Commission, or any agreement state.

(2) Each sealed source shall be tested for leakage at intervals not to exceed six months. Sealed sources that are in stor-

age and not in use do not require leak testing, but must be tested before use or transfer to another person if the interval of storage exceeds six months. In the absence of a certificate from a transferor that a test has been made within the six-month period prior to the transfer, the sealed source shall not be put into use until tested and results obtained.

(3) The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcurie) of removable contamination on the sealed source. An acceptable leak test for sealed sources in the possession of a radiography licensee would be to test at the nearest accessible point to the sealed source storage position, or other appropriate measuring point where contamination might accumulate, by a procedure specifically approved in a license condition. Records of leak test results shall be kept in units of becquerels (microcuries) and maintained for inspection by the department for three years after the leak test is performed.

(4) Any test conducted under subsections (2) and (3) of this section which reveals the presence of 185 becquerels (0.005 microcurie) or more of removable radioactive material shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the equipment involved from use and shall cause it to be decontaminated and repaired or to be disposed in accordance with regulations of the department. Within five days after obtaining results of the test, the licensee shall file a report with the department describing the involved equipment, the test results, and the corrective action taken.

(5) Each exposure device using depleted uranium (DU) shielding and an "S" tube configuration must be tested for DU contamination at intervals not to exceed twelve months. The analysis must be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample and must be performed by a person specifically authorized by the department, the United States Nuclear Regulatory Commission or an agreement state to perform the analysis. If testing reveals the presence of 185 becquerels (0.005 microcuries) or more of removable DU contamination, the exposure device must be removed from use until an evaluation of the wear on the S-tube has been made. If the evaluation reveals that the S-tube is worn through, the device may not be used again. DU shielded devices do not have to be tested for DU contamination while in storage and not in use. Before using or transferring such a device however, the device must be tested for DU contamination if the interval of storage exceeded twelve months. A record of the DU leak-test results shall be kept in units of becquerels (microcuries) and maintained for inspection by the department for three years after the DU leak test is made or until the source in storage is removed. Licensees will have until January 1, 2001, to comply with the DU leak testing requirements of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-090, filed 3/24/00, effective 4/24/00; 99-05-012, § 246-243-090, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-243-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-36-070, filed 12/11/86; 83-19-050 (Order 2026), § 402-36-070, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-070, filed 12/8/80; Order 1084, § 402-36-070, filed 1/14/76; Order 1, § 402-36-070, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-100 Quarterly inventory. Each licensee shall conduct a quarterly physical inventory to account for all sealed sources and for devices containing depleted uranium (DU) received or possessed. The records of the inventories shall be maintained for three years from the date of inventory for inspection by the department and shall include:

- (1) Exposure device or source changer make, model, and serial number;
- (2) Sealed source serial number and manufacturer;
- (3) Radionuclide and current activity in becquerels (curies) or mass (for DU) in each device;
- (4) Location of sealed source and/or device/changer;
- (5) Date of inventory;
- (6) Name of person who performed inventory.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-100, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-100, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-080, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-080, filed 12/8/80; Order 1084, § 402-36-080, filed 1/14/76; Order 1, § 402-36-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-110 Utilization logs. (1) Each licensee shall maintain current logs, which shall be kept available for inspection by the department for three years from the date of the recorded event, at the address specified in the license showing for each sealed source and radiation exposure device the following information:

(a) A description (including the make, model and serial number) of each radiation exposure device or transport or storage container in which the sealed source is located:

(b) The identity and signature of the radiographer to whom assigned; and

(c) Locations where used and dates of use including the dates removed and returned to storage.

(2) A separately identified utilization log is not required if the equivalent information is available in records of the licensee and available at the address specified in the license.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-110, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-110, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-110, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-090, filed 12/8/80; Order 1084, § 402-36-090, filed 1/14/76; Order 1, § 402-36-090, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-120 Inspection and maintenance of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments. (1) The licensee shall perform visual and operability checks on survey meters, radiographic exposure devices, transport and storage containers, associated equipment and source changers before use on each day the equipment is to be used to ensure that the equipment is in good working condition, that the sources are adequately shielded, and that required labeling is present. Survey instrument operability must be performed using check sources or other appropriate means. If equipment problems are found, the equipment must be removed from service until repaired.

(2003 Ed.)

(2) Each licensee shall have written procedures for:

(a) Inspection and routine maintenance of radiographic exposure devices, source changers, associated equipment, transport and storage containers, and survey instruments at intervals not to exceed three months or before the first use thereafter to ensure the proper functioning of components important to safety. Replacement components shall meet design specifications. If equipment problems are found, the equipment must be removed from service until repaired.

(b) Inspection and maintenance necessary to maintain the Type B packaging used to transport radioactive materials. The inspection and maintenance program must include procedures to assure that Type B packages are shipped and maintained in accordance with the certificate of compliance or other approval.

(3) Any maintenance performed on radiographic exposure devices and accessories shall be in accordance with the manufacturer's specifications.

(4) Records of daily checks and quarterly inspections including any equipment problems identified and of any maintenance performed under subsections (1) and (2) of this section shall be made and retained for three years. The record shall include:

(a) The date of check or inspection;

(b) Name of inspector;

(c) Equipment involved;

(d) Any problems found; and

(e) What repair and/or maintenance, if any, was done.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-120, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-120, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-095, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-095, filed 12/8/80; Order 1084, § 402-36-095, filed 1/14/76.]

WAC 246-243-130 Limitations—Personal radiation safety requirements for radiographers and radiographers' assistants. (1) No licensee shall permit any individual to act as a radiographer as defined in this chapter until such individual:

(a) Has been instructed in the subjects outlined in WAC 246-243-230, in addition to a minimum of two months of on-the-job training, and is certified through a radiographer certification program by a certifying entity in accordance with the criteria specified in WAC 246-243-250, Appendix C or equivalent regulations of the United States Nuclear Regulatory Commission or an agreement state. The department maintains a list of recognized certifying entities for reference. The licensee may, until January 1, 2001, allow an individual who has not met the requirement of this subsection, to act as a radiographer after the individual has received training in the subjects outlined in WAC 246-243-230 and demonstrated an understanding of these subjects by successful completion of a written examination that was previously submitted to and approved by the department;

(b) Has received copies of and instruction in the regulations contained in chapters 246-220, 246-221, 246-222, 246-231, and 246-243 WAC, in the United States Department of

[Title 246 WAC—p. 389]

Transportation regulations as referenced in chapter 246-231 WAC, and the applicable sections of appropriate license(s), and the licensee's operating and emergency procedures, and shall have demonstrated understanding thereof by successful completion of a written or oral examination covering this material;

(c) Has received training in the use of the licensee's radiographic exposure devices, sealed sources, in the daily inspection of devices and associated equipment, and in the use of radiation survey instruments; and

(d) Has demonstrated understanding of the use of radiographic exposure devices, sources, survey instruments and associated equipment described in subsection (1)(c) of this section by successful completion of a practical examination on the subjects covered.

(2) No licensee shall permit any individual to act as a radiographer's assistant as defined in this chapter until such individual:

(a) Has received copies of and instruction in the regulations contained in chapters 246-220, 246-221, 246-222, 246-231, and 246-243 WAC, in the United States Department of Transportation regulations as referenced in chapter 246-231 WAC, and the applicable sections of appropriate license(s), and the licensee's operating and emergency procedures;

(b) Has developed competence to use under the personal supervision of the radiographer the radiographic exposure devices, sealed sources, associated equipment, and radiation survey instruments which will be employed in the individual's assignment; and

(c) Has demonstrated understanding of the instructions provided under (a) of this subsection by successfully completing a written test on the subjects covered and has demonstrated competence in the use of the hardware described in (b) of this subsection by successful completion of a practical examination on the use of such hardware.

(3) Each licensee shall maintain, for inspection by the department, records of training and certification which demonstrate that the requirements of subsections (1) and (2) of this section are met. These records shall be maintained for three years after the record is made. The record shall include:

(a) Radiographer certification documents and verification of certification status;

(b) Copies of written tests;

(c) Dates of oral and practical examinations; and

(d) Names of individuals conducting and receiving the oral and practical examinations.

(4) Licensees will have until January 1, 2001, to comply with the certification requirements specified in subsection (1)(a) of this section, and the additional training requirements specified in subsections (1)(b) and (2)(a) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-130, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-100, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-100, filed 12/8/80; Order 1084, § 402-36-100, filed 1/14/76; Order 1, § 402-36-100, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-140 Operating and emergency procedures. The licensee's operating and emergency procedures shall include instructions in at least the following:

(1) The handling and use of sources of radiation to be employed such that no individual is likely to be exposed to radiation doses in excess of the limits established in chapter 246-221 WAC Standards for protection against radiation;

(2) Methods and occasions for conducting radiation surveys;

(3) Methods for controlling access to radiographic areas;

(4) Methods and occasions for locking and securing sources of radiation including radiographic exposure devices, transport and storage containers, and sealed sources;

(5) Personnel monitoring and the use of personnel monitoring equipment including steps that must be taken immediately by radiography personnel if a pocket dosimeter is found to be off-scale or an alarm rate meter alarms unexpectedly;

(6) Transportation to field locations, including packing of sources of radiation in the vehicles, placarding of vehicles when needed, and control of sources of radiation during transportation;

(7) Minimizing exposure of individuals in the event of an accident;

(8) Notifying proper personnel in the event of a theft, loss, overexposure or accident involving sources of radiation;

(9) Maintenance of records;

(10) The inspection, maintenance, and operability checks of radiographic exposure devices, survey instruments, transport containers, and storage containers;

(11) Identifying and reporting defects and noncompliance as required by these regulations; and

(12) Source recovery procedures if the licensee will perform source recovery.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-140, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-140, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-110, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-110, filed 12/8/80; Order 1084, § 402-36-110, filed 1/14/76; Order 708, § 402-36-110, filed 8/24/72; Order 1, § 402-36-110, filed 7/2/71; Order 1, § 402-36-110, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-141 Copies of operating and emergency procedures. Each licensee shall maintain a copy of current operating and emergency procedures until the department terminates the license. Superseded material shall be retained for three years after the change is approved.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-141, filed 3/24/00, effective 4/24/00.]

WAC 246-243-150 Personnel monitoring control. (1) No licensee shall permit any individual to act as a radiographer or as a radiographer's assistant unless, at all times during radiographic operations, each such individual shall wear on the trunk of the body a combination of an approved personnel dosimeter such as a film or TLD badge, a direct reading pocket dosimeter, and an alarming rate meter. In permanent facilities where other appropriate alarming or warning

devices are in routine use, the wearing of an alarming rate meter is not required.

(a) Pocket dosimeters shall be capable of measuring exposures from zero to at least 200 milliroentgens. Electronic personal dosimeters may only be used in place of ion-chamber pocket dosimeters.

(b) A film or TLD badge or other approved personnel dosimeter shall be assigned to and worn by only one individual.

(c) Film badges must be replaced at periods not to exceed one month and TLDs must be replaced at periods not to exceed three months.

(d) After replacement, each film badge or TLD must be processed as soon as possible.

(2)(a) Direct reading dosimeters such as pocket dosimeters or electronic personal dosimeters shall be read and exposures recorded at the beginning and end of each shift. Pocket dosimeters shall be charged at the beginning of each shift. Pocket dosimeters shall be checked annually at periods not to exceed twelve months for correct response to radiation. Acceptable dosimeters shall read within plus or minus twenty percent of the true radiation exposure.

(b) Each alarming rate meter must:

(i) Be checked to ensure that the alarm functions properly (sounds) prior to use at the start of each shift;

(ii) Be set to give an alarm signal at a maximum preset rate of 5 mSv/hr. (500 mR/hr.);

(iii) Require special means to change the preset alarm functions; and

(iv) Be calibrated annually at periods not to exceed twelve months for correct response to radiation: Acceptable rate meters must alarm within plus or minus twenty percent of the true radiation exposure rate.

(3) If an individual's pocket dosimeter is found to be off-scale, or if his or her electronic personal dosimeter reads greater than 2 millisieverts (200 millirems), and the possibility of radiation exposure cannot be ruled out as the cause, the individual's film badge or TLD must be sent for processing within twenty-four hours. In addition, the individual may not resume work associated with licensed material use until a determination of the individual's radiation exposure has been made. This determination shall be made by the RSO or the RSO's designee.

(4) If a film badge or TLD is lost or damaged, the worker shall cease work immediately until a replacement film badge or TLD is provided and the exposure is calculated for the time period from issuance to loss or damage of the film badge or TLD.

(5) Each licensee shall maintain the following exposure records:

(a) Direct reading dosimeter readings and yearly operability checks required by subsection (2) of this section for three years after the record is made.

(b) Records of alarm rate meter calibrations for three years after the record is made.

(c) Reports received from the film badge or TLD processor until the department terminates the licensee.

(d) Records of estimates of exposures as a result of: Off-scale personal direct reading dosimeters, or lost or damaged

(2003 Ed.)

film badges or TLDs, until the department terminates the license.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-150, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-150, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-150, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-120, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-120, filed 12/8/80; Order 1084, § 402-36-120, filed 1/14/76; Order 1, § 402-36-120, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-160 Supervision of radiographers' assistants. Whenever a radiographer's assistant uses radiographic exposure devices, uses sealed sources or associated equipment, or conducts radiation surveys required by WAC 246-243-190 to determine that the sealed source has returned to the shielded position after an exposure, he or she shall be under the personal supervision of a radiographer, as defined in WAC 246-243-020. Personal supervision shall include (1) the radiographer's personal presence at the site where the sealed sources are being used, (2) the ability of the radiographer to communicate and give immediate assistance if required, and (3) the radiographer's ability to observe the performance of his/her assistant during the operations referred to in this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-160, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-160, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-160, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-125, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-125, filed 12/8/80.]

WAC 246-243-170 Security—Precautionary procedures in radiographic operations. (1) During each radiographic operation, the radiographer or radiographer's assistant shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in chapter 246-220 WAC except:

At permanent radiographic installations where all entryways are locked and the requirements of WAC 246-243-220 are met.

(2) When not in operation or when not under direct surveillance, portable radiation exposure devices shall be physically secured to prevent removal by unauthorized personnel.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-170, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-170, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-170, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-130, filed 12/8/80; Order 1084, § 402-36-130, filed 1/14/76; Order 1, § 402-36-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-180 Posting. All areas in which industrial radiography is being performed shall be conspicuously posted as required by WAC 246-221-120. Exceptions listed in WAC 246-221-130 do not apply to industrial radiographic operations.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-180, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-180, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-180, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-140, filed 12/8/80; Order 1084, § 402-36-140, filed 1/14/76; Order 1, § 402-36-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-190 Radiation surveys and survey records. The licensee shall:

(1) Conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of WAC 246-243-080.

(2) Using a survey instrument meeting the requirements of subsection (1) of this section, conduct a survey of the radiographic exposure device and the guide tube after each exposure when approaching the device or the guide tube. The survey shall determine that the sealed source has returned to its shielded position before exchanging films, repositioning the exposure head, or dismantling equipment.

(3) Conduct a survey of the radiographic exposure device with a calibrated radiation survey instrument any time the source is exchanged and whenever a radiographic exposure device is placed in a storage area to ensure that the sealed source is in its shielded position.

(4) Conduct a physical radiation survey of the boundary of the restricted area during radiographic operations not employing shielded room radiography. The maximum survey reading at the boundary shall be recorded. The records shall indicate approximate distance from source to boundaries, whether or not the exposed source is collimated and any occupied areas with exposure levels greater than 2 mR in any hour during radiographic operations.

(5) Maintain a record of each exposure device survey conducted before the device is placed in storage if that survey is the last one performed in the workday, and records required by subsection (4) of this section, including the model and serial number of the survey meter used, for inspection by the department for three years after completion of the survey. If the survey was used to determine an individual's exposure, however, the records of the survey shall be maintained until the department authorizes their disposition.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-190, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-190, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-243-190, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-150, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-150, filed 12/8/80; Order 1084, § 402-36-150, filed 1/14/76; Order 1, § 402-36-150, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-195 Reporting. (1) In addition to the reporting requirements specified in other sections of the regulations, each licensee shall provide a written report to the department within thirty days of the occurrence of any of the following incidents involving radiographic equipment:

(a) Unintentional disconnection of the source assembly from the control cable.

(b) Inability to retract the source assembly to its fully shielded position and secure it in this position.

(c) Failure of any component (critical to safe operation of the device) to properly perform its intended function.

(2) The licensee shall include the following information in each report submitted under subsection (1) of the section.

(a) A description of the equipment problem;

(b) Cause of each incident, if known;

(c) Manufacturer and model number of equipment involved in the incident;

(d) Place, time, and date of incident;

(e) Actions taken to reestablish normal operations;

(f) Corrective actions taken or planned to prevent recurrence;

(g) Qualifications of personnel involved in the incident.

(3) Reports of overexposure submitted under WAC 246-221-260 which involve failure of safety components of radiographic equipment must also include the information specified in subsection (2) of this section.

(4) Any licensee conducting radiographic operations or storing radioactive material at any location not listed on the license for a period in excess of one hundred eighty days in a calendar year, shall notify the department prior to exceeding the one hundred eighty days.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-195, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-195, filed 12/9/93, effective 1/9/94.]

WAC 246-243-200 Records required at temporary job sites. Each licensee conducting radiographic operations at a temporary site shall have copies of the following documents and records available at that site for inspection by the department:

(1) Appropriate license;

(2) Operating and emergency procedures;

(3) Applicable regulations;

(4) Survey records required pursuant to WAC 246-243-190 for the period of operation at the site;

(5) Direct reading dosimeter records for the period of operation at the site;

(6) The latest radiation survey instrument calibration record and leak test record for specific devices in use at the site;

(7) The latest calibration record for alarm rate meters and operability checks of pocket dosimeters and/or electronic personal dosimeters as required by WAC 246-243-150;

(8) Utilization records for each radiographic exposure device dispatched from that location as required by WAC 246-243-110;

(9) Records of equipment problems identified in daily checks of equipment as required by WAC 246-243-120;

(10) Records of alarm system and entrance control checks required by WAC 246-243-220, if applicable;

(11) The shipping papers for the transportation of radioactive materials; and

(12) When operating under reciprocity pursuant to WAC 246-232-040, a copy of the NRC or agreement state license authorizing the use of radioactive material.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-200, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-200, filed 12/9/93, effective 1/9/94.]

tive 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-200, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-153, filed 12/8/80.]

WAC 246-243-203 Form of records. Each record required by this chapter must be legible throughout the specified retention period. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of reproducing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records, such as letters, drawings, and specifications, must include all pertinent information, such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-203, filed 3/24/00, effective 4/24/00.]

WAC 246-243-205 Temporary job site notification.

(1) Each licensee shall provide notification to the department as required by the department, preferably twenty-four hours but no later than two hours, prior to beginning radiographic operations at a temporary job site. The notification will be given by using the prescribed 1-800 telephone notification system. The notification shall include:

- (a) Name and office telephone number of the licensee;
- (b) Radioactive materials license number;
- (c) Address or directions to the temporary job site;
- (d) Specific date(s), time(s), and duration of expected radiographic operations;
- (e) Names of radiographers and, if applicable, radiographer assistants taking part in the radiographic operations; and
- (f) Name and telephone number of a contact person at the temporary job site.

(2) In the event that operations at a temporary job site continue for longer than thirty days, the licensee will renotify the department, as required by subsection (1) of this section, each succeeding month.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-205, filed 12/9/93, effective 1/9/94.]

WAC 246-243-220 Special requirements for permanent radiographic installation. (1) Each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation to which this section applies shall have either:

- (a) An entrance control of the type described in WAC 246-221-102(1) that reduces the radiation level upon entry into the area; or
- (b) Both conspicuous visible and audible warning signals to warn of the presence of radiation. The visible signal shall be actuated by radiation whenever the source is exposed. The audible signal shall be actuated when an attempt is made to enter the installation while the source is exposed.

(2003 Ed.)

(2) The alarm system must be tested for proper operation with a radiation source each day before the installation is used for radiographic operations. The test must include a check of both the visible and audible signals. Entrance control devices that reduce the radiation level upon entry (designated in subsection (1)(a) of this section) shall be tested monthly. If an entrance control device or an alarm is operating improperly, it must be immediately labeled as defective and repaired within seven calendar days. The facility may continue to be used during this seven-day period, provided the licensee implements the continuous surveillance requirements of WAC 246-243-170 and uses an alarming rate meter. Test records for entrance controls and audible and visual alarm must be maintained for three years after the record is made.

(3) The department shall review and approve, in advance of construction, plans for permanent radiographic installations whose construction had not commenced by the effective date of these regulations. Construction of the permanent facility shall be in accordance with the plans approved by the department.

(4) A physical radiation survey shall be conducted and results recorded following construction or major modification of the facility to be used in the installation. Radiography shall not be conducted if exposure levels in unrestricted areas are greater than 2 mR in any hour. Any increase in source strength will require resurvey of the installation prior to the conduct of industrial radiography.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-220, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-220, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-220, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-157, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-157, filed 12/8/80.]

WAC 246-243-230 Appendix A—Minimum subjects to be covered in training radiographers. (1) *Fundamentals of radiation safety*

- (a) Characteristics of ionizing radiation
- (b) Units of radiation dose and quantity of radioactivity
- (c) Hazards of exposure to radiation
- (i) Radiation protection standards
- (ii) Biological effects of radiation dose
- (d) Levels of radiation from sources of radiation
- (e) Methods of controlling radiation dose
- (i) Working time
- (ii) Working distances
- (iii) Shielding

(2) *Radiation detection instrumentation to be used*

- (a) Use of radiation survey instruments
- (i) Operation
- (ii) Calibration
- (iii) Limitations
- (b) Survey techniques
- (c) Use of personnel monitoring equipment
- (i) Film badges
- (ii) Pocket dosimeters
- (iii) Thermoluminescent dosimeters

[Title 246 WAC—p. 393]

- (iv) Alarming rate meters
- (3) *Radiographic equipment to be used*
 - (a) Operation and control of remote handling equipment, radiographic exposure equipment, and storage containers, including pictures or models of source assemblies (pigtailed)
 - (b) Inspection and maintenance of equipment
 - (c) Storage, control, and disposal of licensed material
- (4) *The requirements of pertinent federal and state regulations*
- (5) *The licensee's written operating and emergency procedures*
- (6) *Case histories of radiography accidents.*

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-230, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-230, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-160, filed 12/8/80; Order 1084, § 402-36-160, filed 1/14/76; Order 1, § 402-36-160, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-240 Appendix B—General guidelines for inspection of radiography equipment. (1) Panoramic devices (devices in which the source is physically removed from shielded container during exposure) should be inspected for:

- (a) Radiographic exposure unit;
 - (i) Abnormal surface radiation levels anywhere on camera;
 - (ii) Condition of safety plugs;
 - (iii) Proper operation of locking mechanism;
 - (iv) Condition of pigtail connector;
 - (v) Alignment of "S" tube with exit port;
 - (vi) Condition of carrying device (straps, handle, etc.);
 - (vii) Proper labeling;
- (b) Source tube;
 - (i) Rust, corrosion, dirt, or sludge buildup inside the source tube;
 - (ii) Condition of source tube connector;
 - (iii) Condition of source stop;
 - (iv) Kinks or damage that could prevent proper operation;
- (c) Control cables and drive mechanism;
 - (i) Proper drive mechanism for this camera, if appropriate;
 - (ii) Changes in general operating characteristics;
 - (iii) Condition of connector on drive cable;
 - (iv) Drive cable flexibility, wear, and rust;
 - (v) Excessive wear or damage to crank assembly parts;
 - (vi) Damage to drive cable conduit that could prevent the cable from moving freely;
 - (vii) Connection of the control cable connector with the pigtail connector for proper mating;
 - (viii) Proper operation of source position indicator, if applicable.
- (2) Directional beam devices should be inspected for:
 - (a) Abnormal surface radiation;
 - (b) Changes in the general operating characteristics of the unit;
 - (c) Proper operation of shutter mechanism;
 - (d) Chafing or binding of shutter mechanism;

- (e) Damage to the device which might impair its operation;
- (f) Proper operation of locking mechanism;
- (g) Proper drive mechanism with this camera, if appropriate;
- (h) Condition of carrying device (strap, handle, etc.);
- (i) Proper labeling.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-240, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-165, filed 9/16/83.]

WAC 246-243-250 Appendix C—Radiographer certification. (1) Requirements for an independent certifying organization. An independent certifying organization shall:

- (a) Be an organization such as a society or association, whose members participate in, or have an interest in, the fields of industrial radiography;
- (b) Make its membership available to the general public nationwide that is not restricted because of race, color, religion, sex, age, national origin or disability;
- (c) Have a certification program open to nonmembers, as well as members;
- (d) Be an incorporated, nationally recognized organization that is involved in setting national standards of practice within its fields of expertise;
- (e) Have an adequate staff, a viable system for financing its operations, and a policy- and decision-making review board;
- (f) Have a set of written organizational by-laws and policies that provide adequate assurance of lack of conflict of interest and a system for monitoring and enforcing those by-laws and policies;
- (g) Have a committee, whose members can carry out their responsibilities impartially, to review and approve the certification guidelines and procedures, and to advise the organization's staff in implementing the certification program.
- (h) Have a committee, whose members can carry out their responsibilities impartially, to review complaints against certified individuals and to determine appropriate sanctions;
- (i) Have written procedures describing all aspects of its certification program, maintain records of the current status of each individual's certification and the administration of its certification program;
- (j) Have procedures to ensure that certified individuals are provided due process with respect to the administration of its certification program, including the process of becoming certified and any sanctions imposed against certified individuals;
- (k) Have procedures for proctoring examinations, including qualifications for proctors. These procedures must ensure that the individuals proctoring each examination are not employed by the same company or corporation (or a wholly owned subsidiary of such company or corporation) as any of the examinees;
- (l) Exchange information about certified individuals with the department, the US Nuclear Regulatory Commis-

sion, other independent certifying organizations and/or agreement states and allow periodic review of its certification program and related records; and

(m) Provide a description to the department of its procedures for choosing examination sites and for providing an appropriate examination environment.

(2) Requirements for certification programs. All certification programs must:

(a) Require applicants for certification to:

(i) Receive training in the topics set forth in WAC 246-243-230 or equivalent NRC or agreement state regulations; and

(ii) Satisfactorily complete a written examination covering these topics;

(b) Require applicants for certification to provide documentation that demonstrates that the applicant has:

(i) Received training in the topics set forth in WAC 246-243-230 or equivalent NRC or agreement state regulations;

(ii) Satisfactorily completed a minimum period of on-the-job training; and

(iii) Received verification by an agreement state or a NRC licensee that the applicant has demonstrated the capability of independently working as a radiographer;

(c) Include procedures to ensure that all examination questions are protected from disclosure;

(d) Include procedures for denying an application, revoking, suspending, and reinstating a certificate;

(e) Provide a certification period of not less than three years nor more than five years;

(f) Include procedures for renewing certifications and, if the procedures allow renewals without examination, require evidence of recent full-time employment and annual refresher training;

(g) Provide a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

(3) Requirements for written examinations.

All examinations must be:

(a) Designed to test an individual's knowledge and understanding of the topics listed in WAC 246-243-230 or equivalent NRC or agreement state requirements;

(b) Written in a multiple-choice format;

(c) Have test items drawn from a question bank containing psychometrically valid questions based on the material in WAC 246-243-230.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-250, filed 3/24/00, effective 4/24/00.]

Chapter 246-244 WAC

RADIATION PROTECTION—WIRELINE SERVICES

WAC

246-244-001	Purpose.
246-244-010	Scope.
246-244-020	Definitions.
246-244-030	Prohibitions.
246-244-040	Limits on levels of radiation.
246-244-050	Storage precautions.
246-244-060	Transport precautions.
246-244-070	Radiation survey instruments.
246-244-080	Leak testing of sealed sources.
246-244-090	Inventories.
246-244-100	Utilization logs/records.

(2003 Ed.)

246-244-110	Design, performance, and certification criteria for sealed sources used in downhole operations.
246-244-120	Labeling.
246-244-130	Inspection and maintenance.
246-244-140	Training requirements.
246-244-150	Operating and emergency procedures.
246-244-160	Personnel monitoring.
246-244-170	Radioactive contamination control.
246-244-180	Security.
246-244-190	Handling tools.
246-244-200	Subsurface tracer studies.
246-244-210	Radiation surveys.
246-244-220	Documents and records required at field stations.
246-244-230	Documents and records required at temporary job sites.
246-244-240	Notification of incidents, abandonment, and lost sources.

WAC 246-244-001 Purpose. This chapter establishes radiation safety requirements for persons using sources of radiation for wireline service operations including mineral logging, radioactive markers, and/or subsurface tracers studies. The requirements of this chapter are in addition to, and not in substitution for, requirements of chapters 246-220, 246-221, 246-222, 246-232, and 246-235 WAC.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-010, filed 12/11/86.]

WAC 246-244-010 Scope. The regulations in this chapter apply to all licensees who use sources of radiation for wireline service operations, including mineral logging, radioactive markers, uranium sinker bars, or subsurface tracer studies.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-025, filed 12/11/86.]

WAC 246-244-020 Definitions. As used in this chapter, the following definitions apply:

(1) "Casing" means a metal pipe or tube used as a lining for oil or gas wells to prevent collapse of the well-bore.

(2) "Field station" means a facility where radioactive sources may be stored or used and from which equipment is dispatched to temporary job sites.

(3) "Fresh water aquifer" means a geological formation that is capable of yielding a significant amount of fresh water to a well or spring.

(4) "Injection tool" means a device used for controlled subsurface injection of radioactive tracer material.

(5) "Irretrievable well-logging source" means any sealed source containing licensed material that is pulled off or not connected to the wireline that suspends the source in the well and for which all reasonable effort at recovery has been expended.

(6) "Logging assistant" means an individual who assists the logging supervisor in performing the well-logging operations.

(7) "Logging supervisor" means an individual who provides personal supervision of the use of licensed material at the temporary job site and who is responsible to the licensee for assuring compliance with requirements of the department's regulations and the conditions of the license.

[Title 246 WAC—p. 395]

(8) "Logging tool" means a device used subsurface to perform well-logging.

(9) "Mineral logging" means any logging performed for the purpose of mineral (including water) exploration other than oil or gas.

(10) "Personal supervision" means guidance and instruction by the supervisor who is physically present at the job site and watching the performance of the operation in such proximity that contact is maintained and immediate assistance given as required.

(11) "Radioactive marker" means licensed material used for the purpose of depth determination or direction orientation. This term includes radioactive collar markers and radioactive iron nails.

(12) "Sealed source" means any licensed material that is encased in a capsule designed to prevent leakage or escape of the radioactive material.

(13) "Source holder" means the housing or assembly into which a radioactive source is placed for the purpose of facilitating the handling and use of such source in well-logging operations.

(14) "Subsurface tracer study" means, for the purpose of this chapter, the release of unsealed licensed material or a substance labeled with licensed material in a single well or multiple wells for the purpose of tracing the movement or position of the material or substance in the well-bore or adjacent formation(s) (this term does not include the use of licensed material in field flooding studies).

(15) "Surface casing" means a pipe or tube used as a lining in a well to isolate the fresh water zone from the well.

(16) "Temporary job site" means any location to which radioactive materials have been dispatched or taken to perform wireline service operations or subsurface tracer studies.

(17) "Uranium sinker bar" means a weight containing depleted uranium used for the purpose of providing additional force to pull a logging tool down toward the bottom of a well.

(18) "Well-bore" means any drilled hole in which wireline service operations and/or subsurface tracer studies are performed.

(19) "Well-logging" means the lowering and raising of measuring devices or tools which contain sources of radiation into well-bores or cavities (salt domes, etc.) for the purpose of obtaining information about the well and/or adjacent formations which may be used in oil, gas, mineral or geological explorations.

(20) "Well-logging operation" means any activity involving licensed material performed in a well, including well-logging, mineral logging, subsurface tracer studies, use of radioactive markers, radioactive iron nails, uranium sinker bars, and radioactive sands, and transportation or storage of same.

(21) "Wireline" means a cable containing one or more electrical conductors which is used to lower and raise logging tools in the well-bore.

(22) "Wireline service operation" means any evaluation or mechanical service which is performed in the well-bore using devices containing radioactive material on a wireline.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-030, filed 12/11/86.]

WAC 246-244-030 Prohibitions. No licensee shall perform wireline service operations with a sealed source(s) or conduct subsurface tracer studies with sources of radiation unless, prior to commencement of the operation, the licensee has a written agreement with the well operator, well owner, drilling contractor, or land owner that:

(1) In the event a sealed source is lodged downhole every reasonable effort at recovery will be made;

(2) Potentially contaminated equipment or areas will not be released until an acceptable and documented survey is performed;

(3) Specific types of recovery operations which could endanger the integrity of the sealed source encapsulation will not be permitted or conducted; and

(4) In the event a decision is made to abandon the sealed source downhole, requirements of WAC 246-244-240 shall be met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-040, filed 12/11/86.]

WAC 246-244-040 Limits on levels of radiation. Sources of radiation shall be used, stored, and transported in such a manner that the transportation requirements of chapter 246-231 WAC and the dose limitation requirements of chapter 246-221 WAC are met.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-244-040, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-060, filed 12/11/86.]

WAC 246-244-050 Storage precautions. (1) Each source of radiation, except accelerators, shall be provided with a storage and/or transport container. Such containers shall be utilized. The container shall be provided with a lock (or tamper seal, for calibration sources) to prevent unauthorized removal of, or exposure to, the source(s) of radiation. Such locks shall be used each time the source of radiation is placed in the storage/transport container.

(2) Sources of radiation shall be stored in a manner which will minimize danger from explosion and/or fire.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-080, filed 12/11/86.]

WAC 246-244-060 Transport precautions. (1) Transport containers shall be physically secured to the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal.

(2) Transport of radioactive material shall be in accordance with applicable provisions of the United States Department of Transportation, as required by chapter 246-231 WAC.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-244-060, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-100, filed 12/11/86.]

WAC 246-244-070 Radiation survey instruments. (1)

The licensee or registrant shall maintain and use sufficient calibrated and operable radiation survey instruments at each field station and temporary job site to make physical radiation surveys as required. Instrumentation shall be capable of measuring 0.001 mSv (0.1 millirem) per hour through at least 0.5 mSv (50 millirem) per hour.

(2) Each radiation survey instrument shall be calibrated:

(a) At intervals not to exceed six months and after each instrument servicing;

(b) At energies and radiation levels appropriate for use;

(c) At two points located approximately one-third and two-thirds at full scale on each scale (for logarithmic scale, at midrange of each decade, and at two points of at least one decade); and

(d) Such that accuracy within ± 20 percent of the true radiation levels can be demonstrated on each scale.

(3) Each licensee shall have available additional calibrated and operable radiation detection instruments capable of detecting radiation and contamination levels that could be encountered during well-logging operations or during the event of an accident, e.g., an alpha meter in case of Am-241 source rupture, a contamination meter and probe, and a high level meter capable of detecting radiation levels up to at least one roentgen per hour. The licensee may own such instruments or may make prior arrangements to obtain them expeditiously from a second party as necessary.

(4) Calibration records shall be maintained for a period of at least three years for inspection by the department.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-244-070, filed 2/21/01, effective 3/24/01. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-120, filed 12/11/86.]

WAC 246-244-080 Leak testing of sealed sources.

Each licensee utilizing sealed sources of radioactive material shall have the sources tested for leakage and/or contamination in accordance with WAC 246-221-080.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-140, filed 12/11/86.]

WAC 246-244-090 Inventories. (1) Each licensee shall conduct a physical inventory at intervals not to exceed three months to account for all sources of radiation received and possessed. Records of such inventories shall be maintained for at least two years from the date of the inventory for inspection by the department and shall include the quantities, kinds, and serial numbers of sources of radiation, the location where such sources of radiation are assigned and/or stored,

(2003 Ed.)

the date of the inventory, and the name of the individual conducting the inventory.

(2) Spotmarkers containing radioactive material shall be inventoried prior to arrival at a field site and prior to departure. Records of such inventories shall include the quantity and kinds of radioactive material, serial numbers where appropriate, the date and name of the person performing the inventory, and shall be maintained for inspection by the department.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-160, filed 12/11/86.]

WAC 246-244-100 Utilization logs/records. Each licensee shall maintain current records, which shall be kept available for inspection by the department for two years from the date of recorded event, showing the following information for each source of radiation:

(1) Make, model, and serial number of each source of radiation used;

(2) The identity of the well-logging supervisor and logging assistants to whom assigned;

(3) The locations where used and dates of use; and

(4) In the case of tracer materials and/or radioactive markers, the utilization records shall also indicate the radionuclide and quantity of activity used in a particular well.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-180, filed 12/11/86.]

WAC 246-244-110 Design, performance, and certification criteria for sealed sources used in downhole operations. (1) Each sealed source, except those containing radioactive material in gaseous form, used in downhole operations shall be certified by the manufacturer, or other testing organization acceptable to the department, to meet the following minimum criteria:

(a) Be of doubly encapsulated construction;

(b) Contain radioactive material whose chemical and physical forms are as insoluble and nondispersible, respectively, as practical; and

(c) Has been individually pressure tested to at least 24,656 pounds per square inch absolute (170 MN/m²) without leakage or failure.

(2) Except those containing radioactive material in gaseous form, in the absence of a certificate from a transferor certifying that an individual sealed source meets the requirements of subsections (1) and (3) of this section, the sealed source shall not be put into use until such determinations and testings have been performed and acceptable documented results obtained.

(3) Each sealed source, except those containing a radioactive material in gaseous form, used in downhole operations shall be certified by the manufacturer, or other testing organization acceptable to the department, to meet the sealed source performance requirements for oil well-logging as contained in the January 1986 or most current American National Standard N542, *Sealed Radioactive Sources, Classification*.

(4) Certification documents shall be maintained for inspection by the department for a period of three years after

source disposal. If a source is abandoned downhole, the certification documents shall be maintained until the department authorizes disposition.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-200, filed 12/11/86.]

WAC 246-244-120 Labeling. (1) Each source, source holder, and logging tool containing radioactive material shall bear a durable, legible, and clearly visible marking or label which has, at a minimum, the standard radiation caution symbol, with or without the conventional color requirement, and the following wording: "DANGER (or CAUTION) RADIOACTIVE MATERIAL." This labeling shall be on the smallest component transported as a separate piece of equipment.

(2) Each transport container shall have permanently attached to it a durable, legible, and clearly visible label which has, at a minimum, the standard radiation caution symbol and colors and the following wording: "DANGER (or CAUTION) RADIOACTIVE MATERIAL, NOTIFY CIVIL AUTHORITIES IF FOUND."

(3) The licensee may not use a uranium sinker bar in well-logging operations after December 31, 1987, unless it is clearly and legibly impressed with the words "CAUTION-RADIOACTIVE DEPLETED URANIUM" and "NOTIFY CIVIL AUTHORITIES IF FOUND."

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-220, filed 12/11/86.]

WAC 246-244-130 Inspection and maintenance. (1) Each licensee shall conduct a program of visual inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, injection tools, and sinker bars to ensure that the required labeling is legible and that visual physical damage is absent. The licensee shall perform the visual inspection and maintenance at least every three months. Such inspection and maintenance shall follow the manufacturers recommendations for the equipment involved. Licensees shall maintain records of inspections and maintenance for three years for inspection by the department.

(2) Each licensee shall maintain appropriate copies of manufacturer's operating and maintenance instructions at those locations where such inspection and maintenance is performed.

(3) Each licensee shall inspect the source holders, logging tools, and source handling tools for obvious defects before the equipment is used each day to ensure that the equipment is in good working condition.

(4) If any inspection conducted pursuant to this section reveals damage to the labeling or to components critical for radiation safety, the licensee shall remove the item from service until authorized repairs are made.

(5) Removal of a sealed source from a source holder, and maintenance on sealed sources, holders, or pressure housings in which sealed sources are placed, or on other equipment containing a sealed source may not be performed unless a written instruction for the particular operation in question has

been approved by the department as part of the license application.

(6) If a sealed source is stuck in a source holder or logging tool, the licensee may not perform any operations such as drilling, cutting, or chiseling on the source holder or logging tool, unless it is specifically licensed by the department to perform this operation.

(7) The repair, opening, or modification of any sealed source must be performed only by persons specifically licensed to do so by the department, the United States Nuclear Regulatory Commission, an agreement state, or a licensing state.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-240, filed 12/11/86.]

WAC 246-244-140 Training requirements. (1) The licensee may not permit an individual to act as a logging supervisor until that person:

(a) Has completed at least forty hours of formal training in a course recognized by the department, the United States Nuclear Regulatory Commission, an agreement state, or a licensing state covering the subjects outlined in subsection (5) of this section;

(b) Has received copies of and instruction in:

(i) Washington state regulations contained in this chapter and in the applicable chapters 246-220, 246-221, and 246-222 WAC or their equivalent;

(ii) The license under which the logging supervisor will perform well-logging operations; and

(iii) The licensee's operating, recordkeeping, and emergency procedures.

(c) Has completed three months of on-the-job training and demonstrated competence in the use of licensed materials, remote handling tools, and radiation survey instruments by a field evaluation; and

(d) Has demonstrated understanding of the requirements in (a) and (b) of this subsection by successfully completing a closed book written test.

(2) The licensee may not permit an individual to act as a logging assistant until that person:

(a) Has received copies of and instruction in the licensee's operating and emergency procedures;

(b) Has demonstrated understanding of the materials listed in subsection (1)(a) and (b) of this section by successfully completing a closed book written test; and

(c) Has received instructions in the use, under the personal supervision of the logging supervisor, of tracer material, sealed sources, remote handling tools, and radiation survey instruments, as appropriate.

(3) Each licensee shall provide for documented refresher training of logging supervisors and logging assistants at intervals not to exceed twelve months.

(4) Each licensee shall maintain a record of each logging supervisor's and logging assistant's training, including copies and dates of written tests for a minimum of three years following the termination of employment.

(5) Each licensee shall include the following subjects in the formal training required by this chapter:

(a) **Fundamentals of radiation safety:**

- (i) Characteristics of radiation;
- (ii) Units of radiation dose and quantity of radioactivity;
- (iii) Hazards of exposure to radiation;
- (iv) Levels of radiation from licensed material;
- (v) Methods of controlling radiation dose:
 - (A) Working time;
 - (B) Working distances;
 - (C) Shielding;
 - (D) Radiation safety practices, including prevention and contamination and methods of decontamination;
- (b) **Radiation detection instrumentation to be used:**
 - (i) Use of radiation survey instruments:
 - (A) Operation;
 - (B) Calibration;
 - (C) Limitations;
 - (ii) Survey techniques;
 - (iii) Use of personnel monitoring equipment;
- (c) **Equipment to be used:**
 - (i) Handling equipment and remote handling tools;
 - (ii) Licensed materials;
 - (iii) Storage, control, and disposal of equipment and licensed material;
 - (iv) Operation and control of equipment and licensed materials;
 - (v) Maintenance of equipment;
- (d) Requirements of pertinent state and federal regulations;
- (e) Case histories and potential consequences of accidents in well-logging operations.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-260, filed 12/11/86.]

WAC 246-244-150 Operating and emergency procedures. The licensee's operating and emergency procedures shall include instruction in at least the following:

- (1) Handling and use of sources of radiation to be employed such that no individual is likely to be exposed to radiation doses in excess of the standards established in chapter 246-221 WAC;
- (2) Methods and occasions for conducting radiation surveys;
- (3) Methods and occasions for locking and securing sources of radiation;
- (4) Personnel monitoring and the use and care of personnel monitoring equipment;
- (5) Transportation of sources of radiation to temporary job sites and field stations, including the marking, labeling, packaging, and placing of sources of radiation in vehicles, shipping papers, placarding of vehicles, and physical securing of sources of radiation to transport vehicles during transportation to prevent accidental loss, tampering, or unauthorized removal;
- (6) Minimizing personnel exposure, including that from inhalation and ingestion of licensed material, during well-logging operations and in the event of an accident;
- (7) Procedure for notifying proper personnel in the event of an accident;

(2003 Ed.)

- (8) Maintenance of records;
- (9) Inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, and injection tools;
- (10) Procedures to be followed in the event a sealed source is lodged downhole or ruptured;
- (11) Procedures to be used for picking up, receiving, and opening packages containing radioactive material;
- (12) The procedure and the use of tools for remote handling of sealed sources and radioactive tracer material, except low activity calibration sources;
- (13) The procedure to use for detecting contamination and for preventing the spread of contamination; and
- (14) The procedure to be used to decontaminate the environment, equipment, and/or personnel if any or all are contaminated.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-150, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-280, filed 12/11/86.]

WAC 246-244-160 Personnel monitoring. (1) The licensee may not permit an individual to act as a logging supervisor or logging assistant unless that person wears, at all times during well-logging operations, either a film badge or thermoluminescent dosimeter (TLD). Each film badge or TLD must be assigned to and worn by only one individual. The film badge must be exchanged and analyzed at least monthly and TLD badges exchanged and analyzed at least every three months. The licensee shall have each badge or TLD processed in a timely fashion.

(2) The licensee shall provide appropriate bioassay services to individuals using licensed materials for subsurface tracer studies.

(3) The licensee shall keep reports received from the badge or TLD processor and from the bioassay service laboratory for inspection until the department authorizes disposition or terminates the license.

(4) Personnel monitoring devices and equipment shall monitor for beta, gamma, and neutron radiation as appropriate.

(5) Each licensee shall adhere to the requirements of the department's Regulatory Guide 8.20 *Bioassay Program Criteria for I-125 and I-131*.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-160, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-300, filed 12/11/86.]

WAC 246-244-170 Radioactive contamination control. (1) During efforts to recover a sealed source lodged in the well, the licensee shall continuously monitor, with an appropriate radiation detection instrument, the circulating fluids from the well to check for contamination resulting from damage to the sealed source.

(2) If the licensee detects evidence that the sealed source has ruptured or licensed materials have caused contamination, it shall initiate required emergency procedures.

[Title 246 WAC—p. 399]

(3) If contamination results from the use of licensed material in well-logging operations, the licensee shall decontaminate all work areas, equipment, and unrestricted areas to levels deemed appropriate by the department.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-320, filed 12/11/86.]

WAC 246-244-180 Security. During each logging or tracer application, the logging supervisor or other designated employee shall maintain direct surveillance of the operation to protect against unauthorized and/or unnecessary entry into the restricted area (as defined in WAC 246-220-010).

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-244-180, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-340, filed 12/11/86.]

WAC 246-244-190 Handling tools. The licensee shall provide and require the use of tools that will assure remote handling of sealed sources other than low activity calibration sources.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-360, filed 12/11/86.]

WAC 246-244-200 Subsurface tracer studies. (1) Protective gloves and other appropriate protective clothing and equipment shall be used by all personnel handling radioactive tracer material. Adequate precautions shall be taken to avoid ingestion or inhalation of radioactive material, and to avoid contamination of field site stations and temporary job sites.

(2) No licensee shall cause the injection or administration of radioactive material into fresh water aquifers without prior written authorization from the department and any other appropriate state agency.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-380, filed 12/11/86.]

WAC 246-244-210 Radiation surveys. (1) Radiation surveys shall be made and recorded for each area where radioactive materials are stored at intervals not to exceed six months. In those cases where neutron sources are involved, calculations for dose rate may be substituted for direct measurement.

(2) Radiation surveys shall be made and recorded for the radiation levels in occupied positions and on the exterior of each vehicle used to transport radioactive material. Such surveys shall include each and every source of radiation or combination of sources to be transported in the vehicle. In those cases where neutron sources are involved, calculations for dose rate may be substituted for direct measurement.

(3) After removal of the sealed source from the logging tool and before departing the job site, the logging tool detector shall be energized and/or a survey meter used to assure that the logging tool and all related equipment are free of contamination.

(4) Radiation surveys shall be made and recorded at the job site or well head for each tracer operation, except those

using Hydrogen-3, Carbon-14, or Sulfur-35. Such surveys shall include measurements of radiation levels immediately before and after each operation.

(5) If the licensee suspects that, as a result of operations involving a sealed source, the encapsulation of the sealed source could have been damaged by the operation, it shall conduct a radiation survey, including a contamination survey, during and after the operation.

(6) The licensee shall make a radiation survey at the temporary job site for each subsurface tracer study. The survey must include measurement of radiation levels before and after the operation, and measurement of contamination levels after the subsurface tracer study.

(7) Records of surveys required pursuant to this section shall include the dates, the identification of individuals making the survey, the identification of survey instruments used including make, model, serial number and calibration date, and an exact description of the location of the survey with diagram. Records of these surveys shall be maintained for inspection by the department for at least two years after completion of the survey.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-400, filed 12/11/86.]

WAC 246-244-220 Documents and records required at field stations. Each licensee shall maintain for inspection by the department the following documents and records for the specific devices and sources at the field station:

- (1) Appropriate license or equivalent documents;
- (2) Operating and emergency procedures;
- (3) Applicable regulations;
- (4) Records of the latest survey instrument calibrations required pursuant to WAC 246-244-070;
- (5) Records of the latest leak test results required pursuant to WAC 246-244-080;
- (6) Records of inventories required pursuant to WAC 246-244-090;
- (7) Utilization records required pursuant to WAC 246-244-100;
- (8) Records of inspection and maintenance required pursuant to WAC 246-244-130;
- (9) Survey records required pursuant to WAC 246-244-210; and
- (10) Training records required pursuant to WAC 246-244-140.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-244-220, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-420, filed 12/11/86.]

WAC 246-244-230 Documents and records required at temporary job sites. Each licensee conducting operations at a temporary job site shall have the following documents and records available at all times at that site for inspection by the department:

- (1) Current operating and emergency procedure(s);
- (2) Survey records required pursuant to WAC 246-244-210 for the period of operation at the site;

(3) Actual current calibration certificates (or photocopies) for the radiation survey instruments used at the site;

(4) When operating in the state of Washington under reciprocity, a copy of the appropriate license, and the Washington state rules and regulations for radiation protection;

(5) Records of current leak tests for all sealed sources which require such tests at the job site;

(6) Use logs required pursuant to WAC 246-244-100;

(7) Current United States Department of Transportation shipping papers and transport container certifications for the material transported; and

(8) Records of spotmarker inventories made prior to arrival required pursuant to WAC 246-244-090.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-230, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-440, filed 12/11/86.]

WAC 246-244-240 Notification of incidents, abandonment, and lost sources. (1) Notification of incidents and sources lost in other than downhole logging operations shall be made in accordance with appropriate provisions of chapter 246-221 WAC.

(2) The licensee shall immediately notify the state of Washington division of radiation protection by telephone (206 682-5327) and subsequently within five days by confirmatory letter if:

(a) Licensed material has been lost in or near a fresh water aquifer; or

(b) A sealed source has been ruptured. This notice must designate the well or other location and describe the magnitude and extent of licensed materials, assess the consequences of the loss or rupture, and explain efforts planned or being taken to mitigate these consequences.

(3) Whenever a sealed source or device containing radioactive material is lodged downhole, the licensee shall:

(a) Monitor the surface for the presence of radioactive contamination with an appropriate radiation survey instrument (not the logging tool itself) during logging tool recovery operations; and

(b) Notify the department immediately by telephone if radioactive contamination is detected at the surface or if the source appears to be damaged.

(4) When it becomes apparent that efforts to recover the radioactive source will not be successful, the licensee shall:

(a) Advise the well operator or owner, as appropriate, of the regulations of the state of Washington regarding abandonment, and an appropriate method of abandonment. The licensee shall ensure that such abandonment procedures are implemented within thirty days after the sealed source has been classified as irretrievable. Such abandonment procedures shall include:

(i) Immobilization and sealing in place of the radioactive source with a cement plug;

(ii) The setting of a whipstock or deflection device; and

(iii) The mounting of a permanent identification plaque at the surface of the well, containing the appropriate information required by subsection (5) of this section;

(b) Immediately notify the department by telephone (206 682-5327), giving the circumstances of the loss, and request and receive approval of the proposed abandonment procedures; and

(c) File a written report with the department within thirty days of the abandonment, setting forth the following information:

(i) Date and time of occurrence and a brief description of attempts to recover the source;

(ii) A description of the radioactive source(s) involved, including radionuclide, quantity, make, model and serial number, and chemical and physical form;

(iii) Surface location and identification of well;

(iv) Results of efforts to immobilize and seal the source in place;

(v) Depth of the radioactive source in meters or feet;

(vi) Depth to the top of cement plug in meters or feet;

(vii) Depth of the well in meters or feet; and

(viii) Information contained on the permanent identification plaque.

(5) Whenever a sealed source containing radioactive material is not recovered and is abandoned downhole, the licensee shall provide a permanent plaque at least eighteen centimeters square for posting the well or well bore (see Appendix A). This plaque shall:

(a) Be constructed of long lasting material, such as stainless steel or monel; and

(b) Contain the following information permanently and conspicuously engraved on its face:

(i) The word "CAUTION (or DANGER)";

(ii) The radiation symbol(s) with or without the conventional color requirement;

(iii) The date of abandonment (month/day/year);

(iv) The name of the well operator or well owner;

(v) The well name and well identification number(s) or other designation;

(vi) The sealed source(s) by radionuclide and quantity of activity (if more than one source is involved, information for each source shall be included);

(vii) The source depth and the depth to the top of the plug in meters or feet; and

(viii) An appropriate warning, depending on the specific circumstances of each abandonment.¹

(6) The department may, at its own discretion, impose such other requirements as it may deem necessary.

¹ An example of a suggested plaque is shown in Appendix A of this section. Appropriate warnings may include:

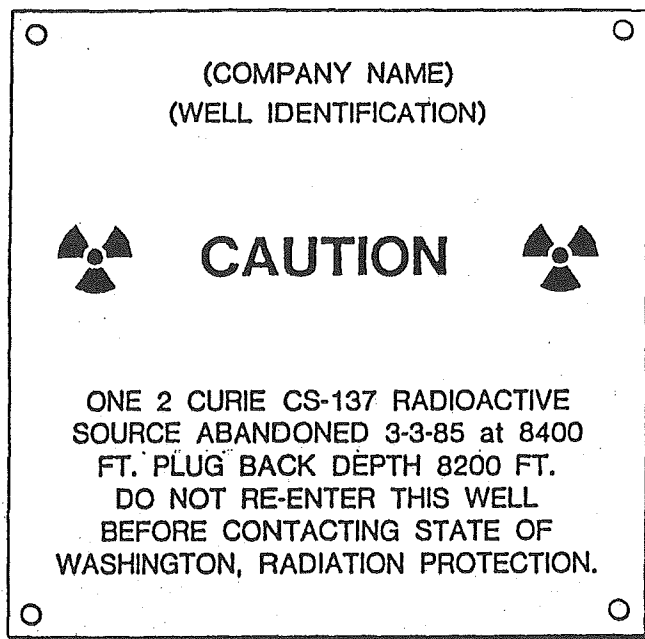
(a) "Do not drill below plug back depth";

(b) "Do not enlarge casing"; and/or

(c) "Do not reenter the hole before contacting the state of Washington division of radiation protection."

APPENDIX A

Example of Plaque for Identifying Wells Containing Sealed Sources Containing Radioactive Material Abandoned Down-hole



The size of the plaque should be convenient for use on active or inactive wells, and shall be at least eighteen centimeters square. Letter size of the word "CAUTION" or "DANGER" shall be approximately twice the letter size of the rest of the information, e.g., one-half inch and one-fourth inch letter size, respectively.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-244-240, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-240, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-500, filed 12/11/86.]

Chapter 246-246 WAC

RADIOACTIVE CRITERIA FOR LICENSE TERMINATION

WAC

246-246-001	General provisions and scope.
246-246-010	Definitions.
246-246-020	Radiological criteria for unrestricted use.
246-246-030	Criteria for license termination under restricted conditions.
246-246-040	Alternate criteria for license termination.
246-246-050	Public notification and public participation.
246-246-060	Minimization of contamination.

WAC 246-246-001 General provisions and scope. (1)

The criteria in this chapter apply to the decommissioning of all facilities licensed or registered under these regulations. For low-level waste disposal facilities (chapter 246-250 WAC), the criteria apply only to ancillary surface facilities that support radioactive waste disposal activities. The criteria do not apply to uranium and thorium recovery facilities

[Title 246 WAC—p. 402]

already subject to chapter 246-252 WAC or to uranium solution extraction facilities.

(2) The criteria in this chapter do not apply to sites which:

(a) Have been decommissioned following department approved procedures prior to the effective date of this rule; and

(b) Have previously submitted and received department approval on a license termination plan (LTP) or decommissioning plan.

(3) After a site has been decommissioned and the license terminated in accordance with the criteria in this chapter, the department will require additional cleanup only if, based on new information, it determines that the criteria of this chapter were not met and residual radioactivity remaining at the site could result in significant threat to public health and safety.

(4) When calculating total effective dose equivalent (TEDE) to the average member of the critical group the licensee shall determine the peak annual TEDE dose expected within the first one thousand years after decommissioning.

(5) The provisions of this chapter do not relieve licensees of meeting all other applicable state and federal laws and rules.

[Statutory Authority: RCW 70.98.050. 01-14-045, § 246-246-001, filed 6/29/01, effective 7/30/01; 00-07-085, § 246-246-001, filed 3/15/00, effective 4/15/00.]

WAC 246-246-010 Definitions. As used in this chapter, the following definitions apply:

(1) "Critical group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(2) "Decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

(a) Release of the property for unrestricted use and termination of the license; or

(b) Release of the property under restricted conditions and termination of the license.

(3) "Distinguishable from background" means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

(4) "Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of chapter 246-221 WAC.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-010, filed 3/15/00, effective 4/15/00.]

(2003 Ed.)

WAC 246-246-020 Radiological criteria for unrestricted use. The department will determine a site is acceptable for unrestricted use if:

(1) The residual radioactivity that is distinguishable from background radiation results in a TEDE to an average member of the critical group that does not exceed 0.25 mSv (25 mrem) per year, including that from ground water sources of drinking water; and

(2) The residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA). Determination of the levels which are ALARA must take into account consideration of any detriments, such as deaths from transportation accidents, expected to potentially result from decontamination and waste disposal.

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-246-020, filed 3/15/00, effective 4/15/00.]

WAC 246-246-030 Criteria for license termination under restricted conditions. A site is acceptable for license termination under restricted conditions if:

(1) The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of WAC 246-246-020 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal;

(2) The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (25 mrem) per year;

(3) The licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are those described in WAC 246-235-075 (4)(a), (b), and (d) and, when a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity;

(4) The licensee has submitted a decommissioning plan or license termination plan (LTP) to the department indicating the licensee's intent to decommission in accordance with WAC 246-232-060(6), and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice;

(a) Licensees proposing to decommission by restricting use of the site shall seek advice from the affected parties regarding the following matters concerning the proposed decommissioning:

(i) Whether provisions for institutional controls proposed by the licensee:

(2003 Ed.)

(A) Will provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (25 mrem) TEDE per year;

(B) Will be enforceable; and

(C) Will not impose undue burdens on the local community or other affected parties;

(ii) Whether the licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site;

(b) In seeking advice on the issues identified in WAC 246-246-030 (4)(a), the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues; and

(5) Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either:

(a) 1 mSv (100 mrem) per year; or

(b) 5 mSv (500 mrem) per year provided the licensee:

(i) Demonstrates that further reductions in residual radioactivity necessary to comply with the 1 mSv/y (100 mrem/y) value of (a) of this subsection are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm;

(ii) Makes provisions for durable institutional controls;

(iii) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every five years to assure that the institutional controls remain in place as necessary to meet the criteria of WAC 246-246-030(2) and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in WAC 246-235-075 (4)(a), (b), and (d).

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-246-030, filed 3/15/00, effective 4/15/00.]

WAC 246-246-040 Alternate criteria for license termination. (1) The department may terminate a license using alternate criteria greater than the dose criterion of WAC 246-246-020, 246-246-030(2), and 246-246-030 (4)(a)(i)(A), if the licensee:

(a) Provides assurance that public health and safety would continue to be protected, and that it is unlikely that the dose from all man-made sources combined, other than medical, would be more than the 1 mSv/y (100 mrem/y) limit of

[Title 246 WAC—p. 403]

WAC 246-221-060, by submitting an analysis of possible sources of exposure;

(b) Has employed to the extent practical restrictions on site use according to the provisions of WAC 246-246-030 in minimizing exposures at the site; and

(c) Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal;

(d) Has submitted a decommissioning plan or license termination plan (LTP) to the department indicating the licensee's intent to decommission in accordance with WAC 246-232-060(6), and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or LTP how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and addressed, as appropriate, following analysis of that advice. In seeking advice, the licensee shall provide:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues;

(2) The use of alternate criteria to terminate a license requires the approval of the department after consideration of the department staff's recommendations that will address any comments provided by the environmental protection agency and any public comments submitted pursuant to WAC 246-246-050.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-040, filed 3/15/00, effective 4/15/00.]

WAC 246-246-050 Public notification and public participation. Upon the receipt of an LTP or decommissioning plan from the licensee, or a proposal by the licensee for release of a site under WAC 246-246-030 or 246-246-040, or whenever the department deems such notice to be in the public interest, the department shall:

(1) Notify and solicit comments from:

(a) Local and other applicable state agencies in the vicinity of the site and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the decommissioning; and

(b) The environmental protection agency for cases where the licensee proposes to release a site pursuant to WAC 246-246-040.

(2) Publish a notice in the Washington State Register and in a forum, such as local newspapers, letters to state or local organizations, or other appropriate forum, that is readily accessible to individuals in the vicinity of the site, and solicit comments from affected parties.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-050, filed 3/15/00, effective 4/15/00.]

[Title 246 WAC—p. 404]

WAC 246-246-060 Minimization of contamination.

Applicants for licenses, other than renewals, after the effective date of this rule, shall describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-060, filed 3/15/00, effective 4/15/00.]

Chapter 246-247 WAC

RADIATION PROTECTION—AIR EMISSIONS

WAC

246-247-001	Purpose.
246-247-002	Authority.
246-247-010	Applicability.
246-247-020	Exemptions.
246-247-030	Definitions.
246-247-040	Standards.
246-247-060	Applications, registration and licensing.
246-247-065	Fees.
246-247-075	Monitoring, testing and quality assurance.
246-247-080	Inspections, reporting, and recordkeeping.
246-247-085	Compliance determination for existing emission units and facilities.
246-247-100	Enforcement actions.
246-247-110	Appendix A—Application information requirements.
246-247-120	Appendix B—BARCT compliance demonstration.
246-247-130	Appendix C—ALARACT compliance demonstration.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-247-050	Registration. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-050, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-060 (Order 2671), § 402-80-060, filed 8/17/88. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-060, filed 12/11/86.] Repealed by 94-07-010, filed 3/4/94, effective 4/4/94. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC.
246-247-070	New and modified sources. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-070, filed 12/11/86.] Repealed by 94-07-010, filed 3/4/94, effective 4/4/94. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC.
246-247-090	Special reports. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-090, filed 12/11/86.] Repealed by 94-07-010, filed 3/4/94, effective 4/4/94. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC.

WAC 246-247-001 Purpose. The purpose of this chapter is to establish application requirements and procedures for the issuance of a radioactive air emissions license and for the regulation of those emissions by the department of health (hereinafter referred to as "the department") to assure compliance with the standards for radioactive air emissions set by the department of ecology pursuant to RCW 70.94.331, promulgated in chapter 173-480 WAC, and with the rules and regulations of this chapter.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-001, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-

(2003 Ed.)

247-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-010, filed 12/11/86.]

WAC 246-247-002 Authority. (1) Rules and regulations set forth herein are adopted and enforced by the department pursuant to the provisions of chapter 70.98 RCW which:

(a) Designate the department as the state's radiation control agency having sole responsibility for the administration of the regulatory, licensing, and radiation control provisions of chapter 70.98 RCW;

(b) Vest in the department the authority to formulate, adopt, promulgate, and repeal codes, rules, and regulations related to the control of sources of ionizing radiation;

(c) Authorize the department to implement an independent statewide program to monitor radioactive air emissions from sources within the state;

(d) Authorize the department to conduct inspections of facilities, both private and public, to determine whether or not there is compliance with or violation of the provisions of chapter 70.98 RCW and rules and regulations issued thereunder; and

(e) Authorize the department to require registration of sources of ionizing radiation.

(2) In addition, RCW 70.94.422 (Washington Clean Air Act) grants to the department the enforcement powers contained in that chapter.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-002, filed 3/4/94, effective 4/4/94.]

WAC 246-247-010 Applicability. (1) The standards and requirements of this chapter apply statewide at the following types of facilities that emit radionuclides to the air:

(a) Facilities licensed by the department or by the United States Nuclear Regulatory Commission (NRC);

(b) United States Department of Energy (DOE) facilities;

(c) Non-DOE federal facilities;

(d) Uranium fuel cycle facilities;

(e) Uranium mills that are processing material; and

(f) Any other facility that the department determines emits or has the potential to emit radionuclides to the ambient air.

(2) The standards and requirements of this chapter apply to point sources, nonpoint sources, and fugitive emissions.

(3) The standards and requirements of this chapter apply to stationary and mobile emission units, whether temporary or permanent.

(4) The control technology standards and requirements of this chapter apply to the abatement technology and indication devices of facilities and emission units subject to this chapter. Control technology requirements apply from entry of radionuclides into the ventilated vapor space to the point of release to the environment.

(5) In accordance with RCW 70.94.161(10), air operating permits issued under chapter 173-401 WAC shall incorporate all applicable requirements of this chapter. Therefore, all facilities listed in subsection (1) of this section that are also subject to the operating permit regulations in chapter 173-401 WAC shall be considered in compliance with the

(2003 Ed.)

requirements of this chapter if they comply with all the applicable requirements of the air operating permit issued under chapter 173-401 WAC. These applicable requirements shall be contained in the radioactive air emissions license which shall be incorporated as part of the air operating permit. In accordance with RCW 70.94.422(1), the department shall enforce all the requirements contained in the radioactive air emissions license.

(6) Should any of the federal regulations that have been adopted by reference in this chapter be rescinded, the affected facilities shall nonetheless comply with all other applicable requirements of this chapter.

(7) An applicant may obtain a copy of any document referenced in this chapter by contacting the department's division of radiation protection, air emissions and defense wastes section at (360) 236-3260. Mail reports, applications, and other written correspondence to the Air Emissions and Defense Wastes Section at Airdustrial Park, Building 5, P.O. Box 47827, Olympia, Washington, 98504-7827.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-247-010, filed 6/8/98, effective 7/9/98. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-010, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-020, filed 12/11/86.]

WAC 246-247-020 Exemptions. (1) The following types of facilities or sources of radiation are exempt from the requirements of this chapter because they release no airborne radioactivity, or they prima facie comply with the standards in WAC 246-247-040, or they are already adequately regulated under other requirements:

(a) Users of only sealed sources;

(b) Sealed sources;

(c) Accelerators less than 200 MeV;

(d) Nuclear-powered vessels underway or moored dockside unless under a maintenance condition with a potential-to-emit;

(e) Uranium mill tailings piles disposed of under 40 CFR Part 192.

(2) Exemption determinations.

(a) Any exemptions shall be consistent with 40 CFR 61. No exemptions from the standards in WAC 246-247-040 will be granted.

(b) A nonfederal facility may request exemption from some of the requirements of WAC 246-247-060 and 246-247-075 if the potential-to-emit, for the emission unit(s) under consideration, results in compliance at level I of the COMPLY computer code or level I of the NCRP's Commentary No. 3, or equivalent as approved by the department.

(c) A federal facility may request exemption from some of the requirements of WAC 246-247-060 and 246-247-075 if the potential-to-emit, for the emission unit(s) under consideration, results in a TEDE to the MEI from all pathways less than 0.1 mrem/yr.

(d) The facility shall submit all the data necessary to make the exemption determinations of (b) and (c) of this subsection. The department shall determine if any exemptions apply.

[Title 246 WAC—p. 405]

(e) Commercial nuclear power plants may request exemption from some of the requirements of this chapter in order to minimize dual regulation with the NRC.

(3) The department may require a facility with exempt emission units to submit a radioactive air emissions report to confirm compliance with applicable standards. The department reserves the right to conduct inspections and audits of the facility to confirm the status of its exempt emission units.

(4) Naturally occurring airborne radionuclides are exempt from the requirements of this chapter unless the concentrations or rates of emissions have been enhanced by industrial processes.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-020, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-247-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-80-030, filed 12/11/86.]

WAC 246-247-030 Definitions. Terms used in this chapter have the definitions set forth below with reference to radioactive air emissions.

(1) "Abatement technology" means any mechanism, process or method that has the potential to reduce public exposure to radioactive air emissions. Abatement control features include automatic mechanisms and administrative controls used in the operation and control of abatement technology from entry of radionuclides into the ventilated vapor space to release to the environment.

(2) "Administrative control" means any policy or procedure that limits the emission of radionuclides.

(3) "ALARA" means as low as reasonably achievable making every reasonable effort to maintain exposures to radiation as far below the dose standards in this chapter as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other socioeconomic considerations, and in relation to the utilization of nuclear energy, ionizing radiation, and radioactive materials in the public interest. See WAC 246-220-007.

(4) "As low as reasonably achievable control technology" (ALARACT) means the use of radionuclide emission control technology that achieves emission levels that are consistent with the philosophy of ALARA. ALARACT compliance is demonstrated by evaluating the existing control system and proposed nonsignificant modifications in relation to applicable technology standards and other control technologies operated successfully in similar applications. In no event shall application of ALARACT result in emissions of radionuclides that could cause exceedance of the applicable standards of WAC 246-247-040. See the definition of ALARA in this section. Note that ALARACT is equivalent to, but replaces, RACT in the May 7, 1986, version of chapter 173-480 WAC.

(5) "Annual possession quantity" means the sum of the quantity of a radionuclide on hand at the beginning of the calendar year and the quantity of that radionuclide received or produced during the calendar year.

(6) "Best available radionuclide control technology" (BARCT) means technology that will result in a radionuclide emission limitation based on the maximum degree of reduction for radionuclides from any proposed newly constructed or significantly modified emission units that the licensing authority determines is achievable on a case-by-case basis. A BARCT compliance demonstration must consider energy, environmental, and economic impacts, and other costs through examination of production processes, and available methods, systems, and techniques for the control of radionuclide emissions. A BARCT compliance demonstration is the conclusion of an evaluative process that results in the selection of the most effective control technology from all known feasible alternatives. In no event shall application of BARCT result in emissions of radionuclides that could exceed the applicable standards of WAC 246-247-040. Control technology that meets BARCT requirements also meets ALARACT requirements. See WAC 173-480-030 and 246-247-120.

(7) "Committed effective dose equivalent" (CEDE) means the sum of the products of absorbed dose from internally deposited radionuclides and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body of reference man over a fifty-year period.

(8) "Construction" means fabrication, erection, or installation of a new building, structure, plant, process, or operation within a facility that has the potential to emit airborne radionuclides. Construction includes activities of a permanent nature aimed at completion of the emission unit, such as pouring concrete, putting in a foundation, or installing utilities directly related to the emission unit. It does not include preliminary activities such as tests to determine site suitability, equipment procurement and storage, site clearing and grading, and the construction of ancillary buildings.

(9) "Decommissioning" means actions taken to reduce or eliminate the potential public health and safety impacts of a building, structure, or plant that has permanently ceased operations, including, but not limited to, actions such as decontamination, demolition, and disposition.

(10) "Emission unit" means any single location that emits or has the potential to emit airborne radioactive material. This may be a point source, nonpoint source, or source of fugitive emissions.

(11) "Facility" means all buildings, structures, plants, processes, and operations on one contiguous site under control of the same owner or operator.

(12) "Fugitive emissions" are radioactive air emissions which do not and could not reasonably pass through a stack, vent, or other functionally equivalent structure, and which are not feasible to directly measure and quantify.

(13) "Indication device" means any method or apparatus used to monitor, or to enable monitoring, the operation of abatement controls or the potential or actual radioactive air emissions.

(14) "License" means a radioactive air emissions license, either issued by the department or incorporated by the department as an applicable portion of an air operating permit issued by the department of ecology or a local air pollution control authority, with requirements and limitations listed therein to which the licensed or permitted party must comply.

Compliance with the license requirements shall be determined and enforced by the department.

(15) "Maximally exposed individual" (MEI) means any member of the public (real or hypothetical) who abides or resides in an unrestricted area, and may receive the highest TEDE from the emission unit(s) under consideration, taking into account all exposure pathways affected by the radioactive air emissions.

(16) "Modification" means any physical change in, or change in the method of operation of, an emission unit that could increase the amount of radioactive materials emitted or may result in the emission of any radionuclide not previously emitted. This definition includes the cleanup of land contaminated with radioactive material, the decommissioning of buildings, structures, or plants where radioactive contamination exists, and changes that will cause an increase in the emission unit's operating design capacity. This definition excludes routine maintenance, routine repair, replacement-in-kind, any increases in the production rate or hours of operation, provided the emission unit does not exceed the release quantities specified in the license application or the operating design capacity approved by the department, addition of abatement technology as long as it is not less environmentally beneficial than existing, approved controls, and changes that result in an increase in the quantity of emissions of an existing radionuclide that will be offset by an equal or greater decrease in the quantity of emissions of another radionuclide that is deemed at least as hazardous with regard to its TEDE to the MEI.

(17) "Monitoring" means the measurement of radioactive material released to the ambient air by means of an inline radiation detector, and/or by the withdrawal of representative samples from the effluent stream. Ambient air measurements may be acceptable for nonpoint sources and fugitive emissions.

(18) "Nonpoint source" is a location at which radioactive air emissions originate from an area, such as contaminated ground above a near-surface waste disposal unit, whose extent may or may not be well-defined.

(19) "Notice of construction" (NOC) is an application submitted to the department by an applicant that contains information required by WAC 246-247-060 for proposed construction or modification of a registered emission unit(s), or for modification of an existing, unregistered emission unit(s).

(20) "Point source" is a discrete, well-defined location from which radioactive air emissions originate, such as a stack, vent, or other functionally equivalent structure.

(21) "Potential-to-emit" means the rate of release of radionuclides from an emission unit based on the actual or potential discharge of the effluent stream that would result if all abatement control equipment did not exist, but operations are otherwise normal. Determine the potential-to-emit by one of the following methods:

(a) Multiply the annual possession quantity of each radionuclide by the release fraction for that radionuclide, depending on its physical state. Use the following release fractions:

- (i) 1 for gases;
- (ii) 10^{-3} for liquids or particulate solids; and
- (iii) 10^{-6} for solids.

Determine the physical state for each radionuclide by considering its chemical form and the highest temperature to which it is subjected. Use a release fraction of one if the radionuclide is subjected to temperatures at or above its boiling point; use a release fraction of 10^{-3} if the radionuclide is subjected to temperatures at or above its melting point, but below its boiling point. If the chemical form is not known, use a release fraction of one for any radionuclide that is heated to a temperature of one hundred degrees Celsius or more, boils at a temperature of one hundred degrees Celsius or less, or is intentionally dispersed into the environment. Other release fractions may be used only with the department's approval; or

(b) Perform a back-calculation using measured emission rates and *in situ* measurements of the control equipment efficiencies, as approved by the department; or

(c) Measure the quantities of radionuclides captured in each control device, coupled with *in situ* measurements of the control equipment efficiencies, as approved by the department; or

(d) Sample the effluent upstream from all control devices, as approved by the department; or

(e) Use an alternative method approved by the department.

(22) "Replacement-in-kind" means the substitution of existing systems, equipment, components, or devices of an emission unit's control technology with systems, equipment, components, or devices with equivalent, or better, performance specifications that will perform the same function(s).

(23) "Routine" means:

(a) Maintenance, repair, or replacement-in-kind performed on systems, equipment, components, or devices of an emission unit's abatement technology as a planned part of an established inspection, maintenance, or quality assurance program that does not increase the emission unit's operating design capacity; or

(b) Normal, day-to-day operations of a facility.

(24) "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix, or radioactive material in airtight containers, designed to prevent release and dispersal of the radioactive material under the most severe conditions encountered in normal use and handling.

(25) "Significant" means the potential-to-emit airborne radioactivity at a rate that could increase the TEDE to the MEI by at least 1.0 mrem/yr as a result of a proposed modification.

(26) "Total effective dose equivalent" (TEDE) means the sum of the dose equivalent due to external exposures and the CEDE due to internal exposures.

(27) "Uranium fuel cycle" means the operations of milling uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity in a nuclear power plant that uses uranium fuel, and reprocessing of spent uranium fuel, to the extent that these operations solely support the production of electrical power for public use. Excluded are mining operations, waste disposal sites, transportation of any radioactive material, and the reuse of recovered nonuranium special nuclear and by-product materials from the cycle.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-030, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-060 (Order 2671), § 402-80-040, filed 8/17/88. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-040, filed 12/11/86.]

WAC 246-247-040 Standards. (1) Standards for radioactive air emissions in the state of Washington are contained in WAC 173-480-040, 173-480-050, and 173-480-060 and in 40 CFR Part 61, subparts H and I published in the *Federal Register* on December 15, 1989. In accordance with WAC 173-480-050(3), the department shall enforce the most stringent standard in effect, notwithstanding any agreement between EPA and any other agency, including those agreements made pursuant to 42 USC 7412(d)(9).

(2) In addition to the radioactive air emission standards of subsection (1) of this section, the department's radioactive materials licensees shall comply with the limitations on radioactive air emissions contained in WAC 246-221-070.

(3) All new construction and significant modifications of emission units commenced after August 10, 1988 (the date this chapter originally became effective) shall utilize BARCT (see Appendix B).

(4) All existing emission units and nonsignificant modifications shall utilize ALARACT (see Appendix C).

(5) In order to implement these standards, the department may set limits on emission rates for specific radionuclides from specific emission units and/or set requirements and limitations on the operation of the emission unit(s) as specified in a license.

(6) All emissions of radionuclides, including those due to emergency conditions resulting from startup, shutdown, maintenance activities, or process upsets are subject to the standards of this section and, therefore, subject to the enforcement actions of WAC 246-247-100.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-040, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-050, filed 12/11/86.]

WAC 246-247-060 Applications, registration and licensing. This section describes the information requirements for approval to construct, modify, and operate an emission unit. Any notice of construction (NOC) requires the submittal of the information listed in Appendix A. Complex projects may require additional information. The applicant should contact the department early in the conceptual design phase for guidance on applicable control technologies to consider.

Appendices B and C outline the procedures to demonstrate compliance with the BARCT and ALARACT standards. Based on the Appendix A information provided, the department may advise the applicant which subset of technologies to consider as candidates for meeting BARCT or ALARACT requirements.

For those facilities subject to the operating permit regulations in chapter 173-401 WAC, the radioactive air emissions license will be incorporated as an applicable portion of

the air operating permit issued by the department of ecology or a local air pollution control authority. The department will be responsible for determining the facility's compliance with and enforcing the requirements of the radioactive air emissions license.

(1) Requirements for new construction or modification of emission units.

(a) Early in the design phase, the applicant shall submit a NOC containing the information required in Appendix A.

(b) Within thirty days of receipt of the NOC, the department shall inform the applicant if additional information is required. The department may determine, on the basis of the information submitted, that the requirements of BARCT or ALARACT have been met, or may require the applicant to submit a BARCT or ALARACT demonstration compatible with Appendix B or C, respectively.

(c) Within sixty days of receipt of all required information, the department shall issue an approval or denial to construct. The department may require changes to the final proposed control technology.

(d) The applicant may request a phased approval process by so stating and submitting a limited application. The department may grant a conditional approval to construct for such activities as would not preclude the construction or installation of any control or monitoring equipment required after review of the completed application.

(e) The department shall issue a license, or amend an existing license, authorizing operation of the emission unit(s) when the proposed new construction or modification is complete. For facilities subject to the air operating permit requirements of chapter 173-401 WAC, the license shall become part of the air operating permit issued by the department of ecology or a local air pollution control authority. For new construction, this action shall constitute registration of the emission unit(s).

(2) Requirements for modification of unregistered emission units that are not exempt from these regulations.

(a) The applicant shall submit an application containing the information required in Appendix A.

(b) Within thirty days of receipt of the application, the department shall inform the applicant if additional information is required. The department may determine, on the basis of the information submitted, that the requirements of BARCT or ALARACT have been met, or may require the applicant to submit a BARCT or ALARACT demonstration compatible with Appendix B or C, respectively.

(c) Within sixty days of receipt of all required information, the department shall issue or amend the license. For facilities subject to the air operating permit requirements of chapter 173-401 WAC, the license shall become part of the air operating permit issued by the department of ecology or a local air pollution control authority. This action shall constitute registration of the emission unit(s). A determination of noncompliance may result in the issuance of a notice of violation.

(d) The department reserves the right to require the owner of an existing, unregistered emission unit to make modifications necessary to comply with the applicable standards of WAC 246-247-040.

(3) If an emission unit is in violation of any standards contained in WAC 246-247-040, the facility shall either submit a compliance plan which describes how it intends to achieve compliance with the standards, and/or cease operation of the emission unit(s). The facility shall submit the compliance plan within forty-five days of the notice of violation. The cessation of operation of the emission unit(s) shall not necessarily exempt the facility from the requirements of this chapter if active or passive ventilation and radioactive air emission controls will still be required. The department reserves the right to take further enforcement action, if necessary, in accordance with WAC 246-247-100.

(4) The facility shall notify the department at least seven calendar days prior to any planned preoperational tests of new or modified emission units that involve emissions control, monitoring, or containment systems of the emission unit(s). The department reserves the right to witness or require preoperational tests involving the emissions control, monitoring, or containment systems of the emission unit(s).

(5) The license shall specify the requirements and limitations of operation to assure compliance with this chapter. The facility shall comply with the requirements and limitations of the license.

(6) All radioactive air emissions licenses issued by the department, except those issued to radioactive materials licensees, shall have an expiration date of five years from date of issuance or as specified in the air operating permit. For radioactive material licensees, the requirements and limitations for the operation of emission units shall be incorporated into their radioactive materials license, and shall expire when the radioactive materials license expires.

(7) Each federal facility that comes under the authority of this chapter shall hold one license for each site, base, or installation. When applicable, the license shall be part of the facility's air operating permit.

(8) Facilities may request a single categorical license which identifies limits and conditions of operation for similar multipurpose temporary and/or portable emission units. When applicable, the license shall be part of the facility's air operating permit.

(9) All facilities with licensed emission units, except for radioactive materials licensees, shall submit a request to the department for renewal of their radioactive air emissions license at least sixty days prior to expiration of the license or as required by the air operating permit. All renewal requests shall include a summary of the operational status of all emission units, the status of facility compliance with the standards of WAC 246-247-040, and the status of any corrective actions necessary to achieve compliance with the requirements of this chapter. Facilities with licensed emission units that also hold a radioactive materials license issued by the department shall submit this information along with their radioactive material license renewal submittal. If the department is unable to renew a radioactive air emissions license before its expiration date, the existing license, with all of its requirements and limitations, remains in force until the department either renews or revokes the license.

(10) For commercial nuclear power plants or any other thermal energy facility subject to chapter 80.50 RCW and to the requirements of this chapter, the radioactive air emissions

license and amendments thereto shall be issued pursuant to a memorandum of agreement between the energy facility site evaluation council (EFSEC) and the department.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-060, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-060, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-060 (Order 2671), § 402-80-065, filed 8/17/88.]

WAC 246-247-065 Fees. (1) All facilities under the authority of this chapter shall submit fees in accordance with WAC 246-254-160.

(2) Those facilities required by WAC 246-254-160(2) to submit an application fee, shall submit the fee with the application.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-065, filed 3/4/94, effective 4/4/94.]

WAC 246-247-075 Monitoring, testing and quality assurance. (1) All radioactive air emissions monitoring, testing, and quality assurance requirements of 40 CFR 61, Subparts H and I published in the *Federal Register* on December 15, 1989, are adopted by reference, as applicable as specified by the referenced subparts.

(2) Equipment and procedures used for the continuous monitoring of radioactive air emissions shall conform, as applicable, to the guidance contained in ANSI N13.1, ANSI N42.18, ANSI N323, ANSI N317, reference methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17 of 40 CFR Part 60, Appendix A, 40 CFR Part 52, Appendix E, and any other methods approved by the department.

(3) The operator of an emission unit with a potential-to-emit of less than 0.1 mrem/yr TEDE to the MEI may estimate those radionuclide emissions, in lieu of monitoring, in accordance with 40 CFR 61 Appendix D, or other procedure approved by the department. The department may require periodic confirmatory measurements (e.g., grab samples) during routine operations to verify the low emissions. Methods to implement periodic confirmatory monitoring shall be approved by the department.

(4) The department may allow a facility to use alternative monitoring procedures or methods if continuous monitoring is not a feasible or reasonable requirement.

(5) The following types of facilities shall determine radionuclide emissions in accordance with either a methodology referenced in subsections (1) through (4) of this section or the respective document referenced below:

(a) Nuclear power reactors licensed by the NRC: Offsite Dose Calculation Manual;

(b) Fuel fabrication plants licensed by the NRC: NRC's Regulatory Guide 4.16, dated December 1985;

(c) Uranium mills that are processing material: NRC's Regulatory Guide 4.14, dated April 1980.

(6) Licensed facilities shall conduct and document a quality assurance program. Except for those types of facilities specified in subsection (5) of this section, the quality assurance program shall be compatible with applicable national standards such as ANSI/ASME NQA-1-1988, ANSI/ASME NQA-2-1986, QAMS-004, and QAMS-005.

(7) Those types of facilities specified in subsection (5) of this section shall conduct and document a quality assurance program compatible with either the applicable national standards referenced in subsection (6) of this section or the NRC's Regulatory Guide 4.15, dated February 1979.

(8) Facilities shall monitor nonpoint and fugitive emissions of radioactive material.

(9) The department may conduct an environmental surveillance program to ensure that radiation doses to the public from emission units are in compliance with applicable standards. The department may require the operator of any emission unit to conduct stack sampling, ambient air monitoring, or other testing as necessary to demonstrate compliance with the standards in WAC 246-247-040.

(10) The department may require the owner or operator of an emission unit to make provision, at existing emission unit sampling stations, for the department to take split or collocated samples of the emissions.

(11) The planning for any proposed new construction or significant modification of the emission unit must address accidental releases with a probability of occurrence during the expected life of the emission unit of greater than one percent.

(12) All facilities must be able to demonstrate that appropriate supervisors and workers are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

(13) All facilities must be able to demonstrate the reliability and accuracy of the radioactive air emissions monitoring data.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-075, filed 3/4/94, effective 4/4/94.]

WAC 246-247-080 Inspections, reporting, and recordkeeping. (1) The department reserves the right to inspect and audit all construction activities, equipment, operations, documents, data, and other records related to compliance with the requirements of this chapter. The department may require a demonstration of ALARACT at any time.

(2) All reporting and recordkeeping requirements of 40 CFR 61, Subparts H and I published in the *Federal Register* on December 15, 1989, are adopted by reference, as applicable as specified by the referenced subparts.

(3) The facility shall annually submit to the department the information requirements adopted in subsection (2) of this section, as applicable, along with the following additional information, as applicable:

(a) The results of emission measurements for those emission units subject only to periodic confirmatory measurements;

(b) Wind rose or joint frequency table;

(c) Annual average ambient temperature;

(d) Annual average emission unit gas temperature, if available;

(e) Annual total rainfall;

(f) Annual average emission unit flow rate and total volume of air released during the calendar year.

If this additional information is available in another annual report, the facility may instead provide a copy of that

[Title 246 WAC—p. 410]

report along with the information requirements in this subsection. Annual reports are due by June 30 for the previous calendar year's operations.

(4) Any report or application that contains proprietary or procurement-sensitive information shall be submitted to the department with those portions so designated. The department shall hold this information confidential, unless required to release the information pursuant to laws, regulations, or court order.

(5) The facility shall notify the department within twenty-four hours of any shutdown, or of any transient abnormal condition lasting more than four hours or other change in facility operations which, if allowed to persist, would result in emissions of radioactive material in excess of applicable standards or license requirements. If requested by the department, the facility shall submit a written report within ten days including known causes, corrective actions taken, and any preventive measures taken or planned to minimize or eliminate the chance of recurrence.

(6) The facility shall file a report of closure with the department whenever operations producing emissions of radioactive material are permanently ceased at any emission unit (except temporary emission units) regulated under this chapter. The closure report shall indicate whether, despite cessation of operations, there is still a potential for radioactive air emissions and a need for an active or passive ventilation system with emission control and/or monitoring devices. If decommissioning is planned and will constitute a modification, a NOC is required, as applicable, in accordance with WAC 246-247-060.

(7) The facility shall maintain a log for each emission unit that has received categorical approval under WAC 246-247-060(8). The log shall contain records of important operations parameters including the date, location, and duration of the release, measured or calculated radionuclide concentrations, the type of emissions (liquid, gaseous, solid), and the type of emission control and monitoring equipment.

(8) The facility shall maintain readily retrievable storage areas for all records and documents related to, and which may help establish compliance with, the requirements of this chapter. The facility shall keep these records available for department inspection for at least five years.

(9) The facility shall ensure all emission units are fully accessible to department inspectors. In the event the hazards associated with accessibility to a unit require training and/or restrictions or requirements for entry, the facility owner or operator shall inform the department, prior to arrival, of those restrictions or requirements. The owner or operator shall be responsible for providing the necessary training, escorts, and support services to allow the department to inspect the facility.

(10) The facility shall make available, in a timely manner, all documents requested by the department for review. The facility shall allow the department to review documents in advance of an inspection. The facility shall allow access to classified documents by representatives of the department with the appropriate security clearance and a demonstrable need-to-know.

(11) The facility shall respond in writing in a timely manner, or within a time limit set by the department, to

(2003 Ed.)

inspection results which require the facility to implement corrective actions or any other actions so directed by the department.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-080, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-080, filed 12/11/86.]

WAC 246-247-085 Compliance determination for existing emission units and facilities. (1) All procedures for determining compliance with the dose equivalent standards of 40 CFR 61, Subparts H and I published in the *Federal Register* on December 15, 1989, are adopted by reference, as applicable as specified by the referenced subparts.

(2) Facilities subject to 40 CFR 61 shall use computer codes or procedures approved by the EPA to determine the TEDE to the MEI; all other facilities shall use computer codes or procedures approved by the department.

(3) The determination of compliance with the dose equivalent standard of WAC 246-247-040 shall include all radioactive air emissions resulting from routine and nonroutine operations for the past calendar year.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-085, filed 3/4/94, effective 4/4/94.]

WAC 246-247-100 Enforcement actions. (1) In accordance with RCW 70.94.422, the department may take any of the following actions to enforce compliance with the provisions of this chapter:

(a) Notice of violation and compliance order (RCW 70.94.332).

(b) Restraining order or temporary or permanent injunction (RCW 70.94.425; also RCW 70.98.140).

(c) Penalty: Fine and/or imprisonment (RCW 70.94.430).

(d) Civil penalty: Up to ten thousand dollars for each day of continued noncompliance (RCW 70.94.431 (1) through (7)).

(e) Assurance of discontinuance (RCW 70.94.435).

(2) The department, in accordance with RCW 70.98.050 (4)(l), may issue subpoenas in order to compel attendance of witnesses and/or production of records or documents in connection with any adjudicative or other administrative proceeding.

(3) The department, in accordance with RCW 70.98.160, may impound sources of ionizing radiation.

(4) The secretary of the department, in accordance with RCW 43.70.190, is authorized to bring an action to prohibit a violation or a threatened violation of any department rules or regulation, or to bring any legal proceeding authorized by law to a county superior court.

(5) Any party, against which an enforcement action is brought by the department, has the right to submit an application for the adjudicative process in accordance with chapter 246-10 WAC and chapter 34.05 RCW.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-100, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-100, filed 12/11/86.]

(2003 Ed.)

WAC 246-247-110 Appendix A—Application information requirements. (1) Name and address of the facility, and location (latitude and longitude) of the emission unit(s).

(2) Name, title, address, and phone number of the responsible manager.

(3) Identify the type of proposed action for which this application is submitted:

(a) Construction of new emission unit(s);

(b) Modification of existing emission unit(s); identify whether this is a significant modification;

(c) Modification of existing unit(s), unregistered.

(4) If this project is subject to the requirements of the State Environmental Policy Act (SEPA) contained in chapter 197-11 WAC, provide the name of the lead agency, lead agency contact person, and their phone number.

(5) Describe the chemical and physical processes upstream of the emission unit(s).

(6) Describe the existing and proposed (as applicable) abatement technology. Describe the basis for the use of the proposed system. Include expected efficiency of each control device, and the annual average volumetric flow rate(s) in meters³/sec for the emission unit(s).

(7) Provide conceptual drawings showing all applicable control technology components from the point of entry of radionuclides into the vapor space to release to the environment.

(8) Identify each radionuclide that could contribute greater than ten percent of the potential-to-emit TEDE to the MEI, or greater than 0.1 mrem/yr potential-to-emit TEDE to the MEI.

(9) Describe the effluent monitoring system for the proposed control system. Describe each piece of monitoring equipment and its monitoring capability, including detection limits, for each radionuclide that could contribute greater than ten percent of the potential-to-emit TEDE to the MEI, or greater than 0.1 mrem/yr potential-to-emit TEDE to the MEI, or greater than twenty-five percent of the TEDE to the MEI, after controls. Describe the method for monitoring or calculating those radionuclide emissions. Describe the method with detail sufficient to demonstrate compliance with the applicable requirements.

(10) Indicate the annual possession quantity for each radionuclide.

(11) Indicate the physical form of each radionuclide in inventory: Solid, particulate solids, liquid, or gas.

(12) Indicate the release form of each radionuclide in inventory: Particulate solids, vapor, or gas. Give the chemical form and ICRP 30 solubility class, if known.

(13) Release rates.

(a) New emission unit(s): Give predicted release rates without any emissions control equipment (the potential-to-emit) and with the proposed control equipment using the efficiencies described in subsection (6) of this section.

(b) Modified emission unit(s): Give predicted release rates without any emissions control equipment (the potential-to-emit) and with the existing and proposed control equipment using the efficiencies described in subsection (6) of this section. Provide the latest year's emissions data or emissions estimates.

[Title 246 WAC—p. 411]

In all cases, indicate whether the emission unit is operating in a batch or continuous mode.

(14) Identify the MEI by distance and direction from the emission unit(s). The MEI is determined by considering distance, windrose data, presence of vegetable gardens, and meat or milk producing animals at unrestricted areas surrounding the emission unit.

(15) Calculate the TEDE to the MEI using an approved procedure (see WAC 246-247-085). For each radionuclide identified in subsection (8) of this section, determine the TEDE to the MEI for existing and proposed emission controls, and without any emission controls (the potential-to-emit) using the release rates from subsection (13) of this section. Provide all input data used in the calculations.

(16) Provide cost factors for construction, operation, and maintenance of the proposed control technology components and system, if a BARCT or ALARACT demonstration is not submitted with the NOC.

(17) Provide an estimate of the lifetime for the facility process with the emission rates provided in this application.

(18) Indicate which of the following control technology standards have been considered and will be complied with in the design and operation of the emission unit(s) described in this application:

ASME/ANSI AG-1, Code on Nuclear Air and Gas Treatment (where there are conflicts in standards with the other listed references, this standard shall take precedence)

ASME/ANSI N509, Nuclear Power Plant Air-Cleaning Units and Components

ASME/ANSI N510, Testing of Nuclear Air Treatment Systems

ANSI/ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities

40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17

ANSI N13.1, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities

For each standard not so indicated, give reason(s) to support adequacy of the design and operation of the emission unit(s) as proposed.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-110, filed 3/4/94, effective 4/4/94.]

WAC 246-247-120 Appendix B—BARCT compliance demonstration. Purpose. A BARCT demonstration is used to choose control technologies for the mitigation of emissions of radioactive material from new emission units or significant modifications to emission units. The bases for the BARCT demonstration requirements are the BARCT standard given in WAC 246-247-040, and the definition of BARCT given in WAC 246-247-030. This procedure incorporates certain implementing criteria that enable the department to evaluate a facility's compliance with the BARCT standard. It is the applicant's responsibility to demonstrate the effectiveness of their BARCT determination to the department. The facility should contact the department at the conceptual design phase for guidance on the BARCT demonstration requirements. The department may adjust this demon-

stration procedure on a case-by-case basis, as needed, to ensure compliance with the substantive standard.

Scope. The BARCT demonstration includes the abatement technology and indication devices that demonstrate the effectiveness of the abatement technology from entry of radionuclides into the ventilated vapor space to release to the environment. The applicant shall evaluate all available control technologies that can reduce the level of radionuclide emissions.

Technology Standards. The BARCT demonstration and the emission unit design and construction must meet, as applicable, the technology standards shown below if the unit's potential-to-emit exceeds 0.1 mrem/yr TEDE to the MEI. If the potential-to-emit is below this value, the standards must be met only to the extent justified by a cost/benefit evaluation.

ASME/ANSI AG-1, Code on Nuclear Air and Gas Treatment (where there are conflicts in standards with the other listed references, this standard shall take precedence)

ASME/ANSI N509, Nuclear Power Plant Air-Cleaning Units and Components

ASME/ANSI N510, Testing of Nuclear Air Treatment Systems

ANSI/ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities

40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17

ANSI N13.1, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities

The following standards and references are recommended as guidance only:

ANSI/ASME NQA-2, Quality Assurance Requirements for Nuclear Facilities

ANSI N42.18, Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents

ERDA 76-21, Nuclear Air Cleaning Handbook

ACGIH 1988, Industrial Ventilation, A Manual of Recommended Practice, 20th ed., American Conference of Governmental Industrial Hygienists

BARCT Demonstration Procedure.

Step 1. Define facility process variables. Describe the physical and chemical process. Include the potential radionuclide release rates (by isotope, in units of curies/year), process variables (such as flow rate, temperature, humidity, chemical composition), and other technical considerations. Base the radionuclide release rate on the potential-to-emit.

Radionuclides selected for consideration in the BARCT demonstration shall include those which contribute more than ten percent of the potential TEDE to the MEI or more than 0.1 mrem/yr, and any others which the department determines are necessary.

Step 2. Gather information on all available control technologies. Search for all available technologies that can reduce the emissions levels for the radionuclides selected in Step 1. Sources of information shall include previous BARCT demonstrations, regulatory authorities, industry or regulatory agency data bases, literature searches, information from technology vendors, research and development reports,

and any other means necessary to identify all available technologies. "Available technology" includes any technology that is commercially available. Recently completed searches may be used with department approval.

Step 3. Determine technical feasibility. Determine technical feasibility by evaluating vendor specifications for available control technologies identified in Step 2 with respect to the process variables identified in Step 1. Evaluate combinations of abatement technology and control devices by component, and the system as a whole.

If a control technology has poor safety, reliability, or control effectiveness as achieved in practice under the proposed process conditions, or the technology is not applicable to the emission unit under consideration, the technology may be eliminated with supporting documentation of the technical infeasibility.

Step 4. List all feasible control technologies in order of effectiveness. Evaluate feasible control technologies for efficiency (effectiveness) in reducing the TEDE to the MEI. List them in order, with the most effective first. If the most effective feasible technology is proposed as BARCT, the demonstration is complete at this step.

Step 5. Evaluate the environmental, energy, and economic impacts. Evaluate each control technology in succession, beginning with the most effective. Present an objective evaluation considering both beneficial and adverse impacts. Quantify the data where possible. Impact cost and effectiveness evaluations are incremental and include only that portion of the facility which comes under the authority of this chapter. Evaluate at least the following impacts:

Environmental impact - Determine the incremental environmental impact, both beneficial and adverse. Evaluate the beneficial impact of reduction in the TEDE to the surrounding population or, at a minimum, to the MEI due to the abatement of radioactive air emissions. Consider the adverse impacts from waste generation (radioactive and nonradioactive, air and nonair), disposal and stabilization, construction of control equipment, and the health and safety to both radiation workers and the general public.

Energy impact - Determine the incremental energy impact. Include the impact of any resulting need for new services such as energy distribution systems.

Economic impact - Determine the incremental economic impact. Determine capital and expense costs including design, development, procurement, construction, operation, maintenance, taxes, waste disposal, and any other applicable financial components. Base all costs on the expected lifetime of the emission unit and reduce to an annualized cost for evaluation and comparison.

The adverse economic impact compared to the beneficial impact, including reduction in TEDE to the surrounding population or the MEI, is a measure of the cost versus benefit for the control technology evaluated.

The most effective technology may be eliminated from consideration if the applicant can demonstrate to the department's satisfaction that the technology has unacceptable impacts. State clearly the basis for this conclusion and proceed to the next most effective control technology. If the next most effective technology is proposed as BARCT, the dem-

onstration is complete; otherwise, evaluate the control technology for impacts in accordance with this step.

If the control technology cannot be eliminated on the basis of its impacts, it is proposed as BARCT.

Reporting. Prepare a BARCT compliance demonstration report for department review. Provide sufficient information such that the department can validate essential results. If no control technology is feasible, and/or emissions are unacceptable, the department reserves the right to prohibit the construction and operation of the emission unit(s).

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-120, filed 3/4/94, effective 4/4/94.]

WAC 246-247-130 Appendix C—ALARACT compliance demonstration. Purpose. An ALARACT demonstration is used for inspection or audit purposes, and to demonstrate compliance with the substantive ALARACT technology standard as required by this chapter. An ALARACT demonstration is used to evaluate the adequacy of control technology on existing emission units and to choose control technologies for proposed nonsignificant modifications of emission units. The bases for the ALARACT demonstration requirements are the ALARACT standards given in WAC 246-247-040 and the definition of ALARACT given in WAC 246-247-030. It is the applicant's responsibility to demonstrate the effectiveness of their ALARACT determination to the department. The department may adjust this demonstration procedure on a case-by-case basis, as needed, to ensure compliance with the substantive standard.

Scope. The ALARACT demonstration includes the abatement technology and indication devices, from entry of radionuclides into the ventilated vapor space to release to the environment. The facility shall evaluate the existing control system in relation to applicable technology standards, and other control technologies that have been successfully operated for similar applications.

Technology Standards. The ALARACT demonstration and the emission unit design and construction must meet, as applicable, the technology standards shown below if the unit's potential-to-emit exceeds 0.1 mrem/yr TEDE to the MEI. If the potential-to-emit is below this value, the standards must be met only to the extent justified by a cost/benefit evaluation.

ASME/ANSI AG-1, Code on Nuclear Air and Gas Treatment (where there are conflicts in standards with the other listed references, this standard shall take precedence)

ASME/ANSI N509, Nuclear Power Plant Air-Cleaning Units and Components

ASME/ANSI N510, Testing of Nuclear Air Treatment Systems

ANSI/ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities

40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17

ANSI N13.1, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities

The following standards and references are recommended as guidance only:

ANSI/ASME NQA-2, Quality Assurance Requirements for Nuclear Facilities

ANSI N42.18, Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents

ERDA 76-21, Nuclear Air Cleaning Handbook

ACGIH 1988, Industrial Ventilation, A Manual of Recommended Practice, 20th ed., American Conference of Governmental Industrial Hygienists

ALARA References. "Health Physics Manual of Good Practice for Reducing Radiation Exposure to Levels that are As Low As Reasonably Achievable (ALARA)", PNL-6577, June, 1988; prepared for the USDOE by Pacific Northwest Laboratories (Battelle Memorial Institute).

"A Guide to Reducing Radiation Exposure to As Low As Reasonably Achievable (ALARA)", DOE/EV/1830-T5, April, 1980, R.L. Kathren and J.M. Selby; prepared for the USDOE by Pacific Northwest Laboratories (Battelle Memorial Institute).

"A Practical Method of Performing Cost-Benefit Analysis of Occupational and Environmental Protective Measures", WHC-SA-0484-FP, March, 1989, G.F. Boothe and D.E. Webb; prepared for the USDOE by Westinghouse Hanford Company.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-130, filed 3/4/94, effective 4/4/94.]

Chapter 246-249 WAC

RADIOACTIVE WASTE—USE OF THE COMMERCIAL DISPOSAL SITE

WAC

246-249-001	Purpose and scope.
246-249-010	Definitions.
246-249-020	Site use permit.
246-249-030	Waste shipment certification.
246-249-040	Classification of radioactive waste for near-surface disposal.
246-249-050	Acceptable radioactive waste forms and packaging.
246-249-060	Labeling.
246-249-070	Variances.
246-249-080	Naturally occurring and accelerator produced radioactive material (NARM), excluding source material.
246-249-090	Transfer for disposal and manifests.

WAC 246-249-001 Purpose and scope. This chapter provides rules governing generators and brokers of low-level radioactive waste seeking to dispose of such waste at any commercial disposal facility in the state of Washington. These rules are in addition to applicable requirements of the United States Nuclear Regulatory Commission (NRC), the United States Department of Transportation (DOT), and other requirements of Title 246 WAC, the requirements of the department of ecology, Title 173 WAC, and conditions of the license issued to the disposal site operator(s).

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-001, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-010, filed 12/11/86.]

WAC 246-249-010 Definitions. As used in this chapter, the following definitions apply:

[Title 246 WAC—p. 414]

(1) "Low-level radioactive waste" has the same meaning as in the Low-Level Radioactive Waste Policy Amendments Act of 1985, Public Law 99-240, that is, radioactive waste not classified as high-level radioactive waste, spent nuclear fuel, or by-product material as defined in section 11e.(2) of the Atomic Energy Act.

(2) "Broker" means a person who performs one or more of the following functions for a low-level radioactive waste generator:

(a) Arranges for transportation of the low-level radioactive waste;

(b) Collects and/or consolidates shipments of such low-level radioactive waste (waste collector);

(c) Processes such low-level radioactive waste in some manner; provided it shall not mean a carrier whose sole function is to transport such low-level radioactive waste (waste processor).

(3) "Chelating agent" means amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxy-carboxylic acids, and polycarboxylic acids (e.g., citric acid, carboic acid, and glucinic acid).

(4) "Chemical description" means a description of the principal chemical characteristics of a low-level radioactive waste.

(5) "Computer-readable medium" means that the regulatory agency's computer can transfer the information from the medium into its memory.

(6) "Consignee" means the designated receiver of the shipment of low-level radioactive waste.

(7) "Decontamination facility" means a facility operating under a commission or agreement state license whose principal purpose is decontamination of equipment or materials to accomplish recycle, reuse, or other waste management objectives, and, for purposes of this section, is not considered to be a consignee for LLW shipments.

(8) "Disposal container" means a container principally used to confine low-level radioactive waste during disposal operations at a land disposal facility (also see "high integrity container"). Note that for some shipments, the disposal container may be the transport package.

(9) "EPA identification number" means the number received by a transporter following application to the administrator of EPA as required by 40 CFR Part 263.

(10) "Generator" means a licensee operating under a commission or agreement state license who:

(a) Is a waste generator as defined in this part; or

(b) Is the licensee to whom waste can be attributed within the context of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (e.g., waste generated as a result of decontamination or recycle activities).

(11) "High integrity container (HIC)" means a container commonly designed to meet the structural stability requirements of this chapter, and to meet department of transportation requirements for a Type A package.

(12) "Land disposal facility" means the land, buildings, and equipment which are intended to be used for the disposal of radioactive wastes. For the purposes of this chapter, a land disposal facility does not include a geologic repository.

(13) "Motor vehicle" means any vehicle, truck, tractor, semi-trailer, or trailer (or any permitted combination of

censee's or applicant's activities subject to these regulations may not:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the department; or

(ii) Deliberately submit to the department, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the department.

(c) For the purposes of this section, deliberate misconduct by a person means an intentional act or omission that the person knows would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the department.

[Statutory Authority: RCW 70.98.050. 01-02-067, § 246-220-060, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-060, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-130, filed 2/6/76; Order 1, § 402-12-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-070 Impounding. Sources of radiation shall be subject to impoundment pursuant to RCW 70.98.-160.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-12-140, filed 12/11/86; Order 1095, § 402-12-140, filed 2/6/76; Order 1, § 402-12-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-220-080 Prohibited uses. (1) Hand-held fluoroscopic screens shall not be used unless listed in the Registry of Sealed Sources and Devices or accepted for certification by the United States Food and Drug Administration, Center for Devices and Radiological Health.

(2) Shoe-fitting fluoroscopic devices shall not be used.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-080, filed 12/27/90, effective 1/31/91; Order 1095, § 402-12-150, filed 2/6/76.]

WAC 246-220-090 Communications. All communications and reports concerning these regulations, and applications filed thereunder, should be addressed to the Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827. The emergency telephone number in Seattle, is 206-682-5327 or 206 (NUCLEAR).

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-220-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-220-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-12-160, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-160, filed 12/8/80; Order 1095, § 402-12-160, filed 2/6/76.]

WAC 246-220-100 Additional requirements. The department may, by rule, regulation, or order, impose upon any licensee or registrant such requirements in addition to those established in these regulations as it deems appropriate

(2003 Ed.)

or necessary to minimize danger to public health and safety or property.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-220-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-12-170, filed 12/8/80; Order 1095, § 402-12-170, filed 2/6/76.]

Chapter 246-221 WAC

RADIATION PROTECTION STANDARDS

WAC

246-221-001	Purpose and scope.
246-221-005	Radiation protection programs.
246-221-010	Occupational dose limits for adults.
246-221-015	Compliance with requirements for summation of external and internal doses.
246-221-020	Determination of prior occupational dose.
246-221-030	Requirements for planned special exposures.
246-221-040	Determination of internal exposure of individuals to concentrations of radioactive materials in restricted areas.
246-221-050	Occupational dose limits for minors.
246-221-055	Dose equivalent to an embryo/fetus.
246-221-060	Dose limits for individual members of the public.
246-221-070	Compliance with dose limits for individual members of the public.
246-221-080	Leak tests.
246-221-090	Personnel monitoring for external dose.
246-221-100	Personnel monitoring for internal dose.
246-221-102	Control of access to high radiation areas.
246-221-104	Control of access to very high radiation areas.
246-221-106	Control of access to very high radiation areas—Irradiators.
246-221-110	Surveys.
246-221-113	Use of process, engineering or other controls.
246-221-117	Use of individual respiratory protection equipment.
246-221-120	Caution signs, and labels.
246-221-130	Exceptions from posting and labeling requirements.
246-221-140	Instruction of personnel.
246-221-150	Security and control of stored radioactive material and radiation machines.
246-221-160	Procedures for picking up, receiving, and opening packages.
246-221-170	Waste disposal, general requirement.
246-221-180	Method of obtaining approval of proposed disposal procedures.
246-221-190	Disposal by release into sanitary sewerage systems.
246-221-200	Disposal by burial in soil.
246-221-210	Disposal by incineration.
246-221-220	Disposal of specific wastes.
246-221-230	Records important to radiation safety.
246-221-240	Reports of stolen, lost or missing radiation sources.
246-221-250	Notification of incidents.
246-221-260	Reports of overexposures and excessive levels and concentrations.
246-221-265	Special reports to the department—Planned special exposures and leaking sources.
246-221-270	Vacating premises and release of equipment.
246-221-275	Notification of changes in a facility.
246-221-280	Notifications and reports to individuals.
246-221-285	Assigned protection factors for respirators ^a .
246-221-290	Appendix A—Annual limits on intake (ALI) and derived air concentrations (DAC) of radionuclides for occupational exposure; effluent concentrations; concentrations for release to sanitary sewerage.
246-221-300	Appendix B—Minimum quantities of radioactive material requiring labeling.

WAC 246-221-001 Purpose and scope. (1) This chapter establishes standards for protection against radiation hazards. Except as otherwise specifically provided, this chapter applies to all licensees or registrants. The requirements of this chapter are designed to control the receipt, possession, use, transfer, and disposal of sources of radiation by any licensee or registrant so the total dose to an individual, including doses resulting from all sources of radiation other than back-

[Title 246 WAC—p. 207]

ground radiation, does not exceed the standards for protection against radiation prescribed in this chapter.

(2) The limits in this chapter do not apply to doses due to background radiation, to exposure of patients to radiation for the purpose of medical diagnosis or therapy, to exposure from individuals administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, or to voluntary participation in medical research programs.

(3) Nothing in this chapter shall be interpreted as limiting actions that may be necessary to protect health and safety in an emergency.

(4) The definitions contained in WAC 246-220-010 also apply to this chapter. WAC 246-220-007, Statement of philosophy, is directly applicable to this chapter.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-221-001, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-001, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-001, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-010, filed 2/6/76; Order 1, § 402-24-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-005 Radiation protection programs.

(1) Each specific licensee shall develop, document, and implement a radiation protection program sufficient to ensure compliance with the provisions of this chapter.

(2) The licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).

(3) The licensee shall review the radiation protection program content and implementation at the frequency specified in the license.

(4) To implement the ALARA requirements of subsection (2) of this section, and notwithstanding the requirements of WAC 246-221-060, a constraint on air emission of radioactive material to the environment, excluding radon-220, radon-222 and their daughters, shall be established by licensees such that the individual member of the public likely to receive the highest dose will not be expected to receive a total effective dose equivalent in excess of 0.1 mSv (10 mrem) per year from these emissions. This dose constraint does not apply to sealed sources or to accelerators less than 200MeV. If a licensee subject to this requirement exceeds this dose constraint, the licensee shall report the exceedance as provided in WAC 246-221-260 and promptly take appropriate corrective action to ensure against recurrence.

(5) Each licensee shall maintain records of the radiation protection program, including:

(a) The provisions of the program; and

(b) Audits, where required, and other reviews of program content and implementation.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-005, filed 2/21/01, effective 3/24/01; 99-15-105, § 246-221-005, filed 7/21/99, effective 8/21/99; 94-01-073, § 246-221-005, filed 12/9/93, effective 1/9/94.]

WAC 246-221-010 Occupational dose limits for adults.

(1) The licensee or registrant shall control the occupational dose to individual adults, except for planned special

exposures pursuant to WAC 246-221-030, to the following dose limits:

(a) An annual limit, which is the more limiting of:

(i) The total effective dose equivalent being equal to 0.05 Sv (5 rem); or

(ii) The sum of the deep dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 0.50 Sv (50 rem).

(b) The annual limits to the lens of the eye, to the skin, and to the extremities which are:

(i) A lens dose equivalent of 0.15 Sv (15 rem); and

(ii) A shallow dose equivalent of 0.50 Sv (50 rem) to the skin or to any extremity.

(2) Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, must be subtracted from the limits specified in WAC 246-221-030 for planned special exposures that the individual may receive during the current year and during the individual's lifetime.

(3) The assigned deep dose equivalent and shallow dose equivalent shall be for the portion of the body receiving the highest exposure. The deep dose equivalent, lens dose equivalent and shallow dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.

(4) Derived air concentration (DAC) and annual limit on intake (ALI) values are specified in WAC 246-221-290 and may be used to determine the individual's dose and to demonstrate compliance with the occupational dose limits.

(5) Notwithstanding the annual dose limits, the licensee shall limit the soluble uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity.

(6) The licensee or registrant shall reduce the dose that an individual may be allowed to receive in the current year by the amount of occupational dose received while employed by any other person during the current year as determined in accordance with WAC 246-221-020.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-010, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-010, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-24-020, filed 12/11/86. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-020, filed 12/8/80; Order 1095, § 402-24-020, filed 2/6/76; Order 1, § 402-24-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-015 Compliance with requirements

for summation of external and internal doses. (1) If the licensee is required to monitor under both WAC 246-221-090 and 246-221-100, the licensee shall demonstrate compliance with the dose limits by summing external and internal doses. If the licensee is required to monitor only under WAC 246-221-090 or only under WAC 246-221-100, then summation is not required to demonstrate compliance with the dose limits. The licensee may demonstrate compliance with the requirements for summation of external and internal doses

under subsections (2), (3), and (4) of this section. The dose equivalents for the lens of the eye, the skin, and the extremities are not included in the summation, but are subject to separate limits.

(2) **Intake by inhalation.** If the only intake of radionuclides is by inhalation, the total effective dose equivalent limit is not exceeded if the sum of the deep dose equivalent divided by the total effective dose equivalent limit, and one of the following, does not exceed unity:

(a) The sum of the fractions of the inhalation ALI for each radionuclide; or

(b) The total number of derived air concentration-hours (DAC-hours) for all radionuclides divided by two thousand; or

(c) The sum of the calculated committed effective dose equivalents to all significantly irradiated organs or tissues (T) calculated from bioassay data using appropriate biological models and expressed as a fraction of the annual limit. For purposes of this requirement, an organ or tissue is deemed to be significantly irradiated if, for that organ or tissue, the product of the weighting factors, w_T , and the committed dose equivalent, $H_{T,50}$, per unit intake is greater than ten percent of the maximum weighted value of H_{50} , that is, $w_T H_{T,50}$, per unit intake for any organ or tissue.

(3) **Intake by oral ingestion.** If the occupationally exposed individual also receives an intake of radionuclides by oral ingestion greater than ten percent of the applicable oral ALI, the licensee shall account for this intake and include it in demonstrating compliance with the limits.

(4) **Intake through wounds or absorption through skin.** The licensee shall evaluate and, to the extent practical, account for intakes through wounds or skin absorption. The intake through intact skin has been included in the calculation of DAC for hydrogen-3 and does not need to be evaluated or accounted for pursuant to this section.

(5) **External dose from airborne radioactive material.** Licensees shall, when determining the dose from airborne radioactive material, include the contribution to the deep dose equivalent, lens dose equivalent, and shallow dose equivalent from external exposure to the radioactive cloud. Airborne radioactivity measurements and DAC values shall not be used as the primary means to assess the deep dose equivalent when the airborne radioactive material includes radionuclides other than noble gases or if the cloud of airborne radioactive material is not relatively uniform. The determination of the deep dose equivalent to an individual shall be based upon measurements using instruments or individual monitoring devices.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-015, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-015, filed 12/9/93, effective 1/9/94.]

WAC 246-221-020 Determination of prior occupational dose. (1) For each individual who is likely to receive, in a year, an occupational dose requiring monitoring pursuant to WAC 246-221-090 and 246-221-100, the licensee or registrant shall:

(a) Determine the occupational radiation dose received during the current year; and

(b) Attempt to obtain the records of lifetime cumulative occupational radiation dose.

(2) Prior to permitting an individual to participate in a planned special exposure, the licensee or registrant shall determine:

(a) The internal and external doses from all previous planned special exposures; and

(b) All doses in excess of the limits, including doses received during accidents and emergencies, received during the lifetime of the individual.

(3) In complying with the requirements of subsection (1) of this section, a licensee or registrant may:

(a) Accept, as a record of the occupational dose that the individual received during the current year, a written signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual received during the current year; and

(b) Accept, as the record of lifetime cumulative radiation dose, an up-to-date Form RHF-4A, or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant; and

(c) Obtain reports of the individual's dose equivalent from the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee or registrant, by telephone, telegram, facsimile, or letter. The licensee or registrant shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.

(4) The licensee or registrant shall record the exposure history, as required by subsection (1) of this section, on Form RHF-4A, or other clear and legible record, of all the information required on that form. The form or record shall show each period in which the individual received occupational exposure to radiation or radioactive material and shall be signed by the individual who received the exposure. For each period for which the licensee or registrant obtains reports, the licensee or registrant shall use the dose shown in the report in preparing Form RHF-4A. For any period in which the licensee or registrant does not obtain a report, the licensee or registrant shall place a notation on Form RHF-4A indicating the periods of time for which data are not available.

(5) Licensees or registrants are not required to reevaluate the separate external dose equivalents and internal committed dose equivalents or intakes of radionuclides assessed under the regulations in effect before January 1, 1994. Further, occupational exposure histories obtained and recorded on Form RHF-4 before January 1, 1994, would not have included effective dose equivalent, but may be used in the absence of specific information on the intake of radionuclides by the individual.

(6) If the licensee or registrant is unable to obtain a complete record of an individual's current and previously accumulated occupational dose, the licensee or registrant shall assume:

(a) In establishing administrative controls under WAC 246-221-010(6) for the current year, that the allowable dose limit for the individual is reduced by 12.5 mSv (1.25 rem) for

each calendar quarter for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure; and

(b) That the individual is not available for planned special exposures.

(7) The licensee or registrant shall retain the records on Form RHF-4A or equivalent until the department terminates each pertinent license requiring this record. The licensee or registrant shall retain records used in preparing Form RHF-4 or RHF-4A for three years after the record is made.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-221-020, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-221-020, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-024, filed 12/8/80; Order 1095, § 402-24-024, filed 2/6/76.]

WAC 246-221-030 Requirements for planned special exposures. A licensee or registrant may authorize an adult worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in WAC 246-221-010 provided that each of the following conditions is satisfied:

(1) The licensee or registrant authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated to result from the planned special exposure are unavailable or impractical.

(2) The licensee or registrant, and employer if the employer is not the licensee or registrant, specifically authorizes the planned special exposure, in writing, before the exposure occurs.

(3) Before a planned special exposure, the licensee or registrant ensures that each individual involved is:

(a) Informed of the purpose of the planned operation; and

(b) Informed of the estimated doses and associated potential risks and specific radiation levels or other conditions that might be involved in performing the task; and

(c) Instructed in the measures to be taken to keep the dose ALARA considering other risks that may be present.

(4) Prior to permitting an individual to participate in a planned special exposure, the licensee or registrant ascertains prior doses as required by WAC 246-221-020(2) during the lifetime of the individual for each individual involved.

(5) Subject to WAC 246-221-010(2), the licensee or registrant shall not authorize a planned special exposure that would cause an individual to receive a dose from all planned special exposures and all doses in excess of the limits to exceed:

(a) The numerical values of any of the dose limits in WAC 246-221-010(1) in any year; and

(b) Five times the annual dose limits in WAC 246-221-010(1) during the individual's lifetime.

(6) The licensee or registrant maintains records that describe:

(a) The exceptional circumstances requiring the use of a planned special exposure;

(b) The name of the management official who authorized the planned special exposure and a copy of the signed authorization;

(c) What actions were necessary;

(d) Why the actions were necessary;

(e) What precautions were taken to assure that doses were maintained ALARA; and

(f) What individual and collective doses were expected to result.

(7) The licensee or registrant records the best estimate of the dose resulting from the planned special exposure in the individual's record and informs the individual, in writing, of the dose within thirty days from the date of the planned special exposure. The dose from planned special exposures shall not be considered in controlling future occupational dose of the individual under WAC 246-221-010(1) but shall be included in evaluations required by subsections (4) and (5) of this section.

(8) The licensee or registrant submits a written report in accordance with WAC 246-221-265.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-030, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-027, filed 12/8/80.]

WAC 246-221-040 Determination of internal exposure of individuals to concentrations of radioactive materials in restricted areas. For purposes of assessing dose used to determine compliance with occupational dose equivalent limits, the licensee shall, when required under WAC 246-221-100, take suitable and timely measurements of:

(a) Concentrations of radioactive materials in air in work areas; or

(b) Quantities of radionuclides in the body; or

(c) Quantities of radionuclides excreted from the body; or

(d) Combinations of these measurements.

(2) Unless respiratory protective equipment is used, as provided in WAC 246-221-117, or the assessment of intake is based on bioassays, the licensee shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.

(3) When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior or the material in an individual is known, the licensee may:

(a) Use that information to calculate the committed effective dose equivalent, and, if used, the licensee shall document that information in the individual's record; and

(b) Upon prior approval of the department, adjust the DAC or ALI values to reflect the actual physical and chemical characteristics of airborne radioactive material, for example, aerosol size distribution or density; and

(c) Separately assess the contribution of fractional intakes of Class D, W, or Y compounds of a given radionuclide to the committed effective dose equivalent. See WAC 246-221-290.

(4) If the licensee chooses to assess intakes of Class Y material using the measurements given in subsection (1)(b) or (c) of this section, the licensee may delay the recording and reporting of the assessments for periods up to seven months, unless otherwise required by WAC 246-221-250 or 246-221-260. This delay permits the licensee to make additional measurements basic to the assessments.

(5) If the identity and concentration of each radionuclide in a mixture are known, the fraction of the DAC applicable to the mixture for use in calculating DAC-hours shall be either:

(a) The sum of the ratios of the concentration to the appropriate DAC value, that is, D, W, or Y, from WAC 246-221-290 for each radionuclide in the mixture; or

(b) The ratio of the total concentration for all radionuclides in the mixture to the most restrictive DAC value for any radionuclide in the mixture.

(6) If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.

(7) When a mixture of radionuclides in air exists, a licensee may disregard certain radionuclides in the mixture if:

(a) The licensee uses the total activity of the mixture in demonstrating compliance with the dose limits in WAC 246-221-010 and in complying with the monitoring requirements in WAC 246-221-100; and

(b) The concentration of any radionuclide disregarded is less than ten percent of its DAC; and

(c) The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed thirty percent.

(8) When determining the committed effective dose equivalent, the following information may be considered:

(a) In order to calculate the committed effective dose equivalent, the licensee may assume that the inhalation of one ALI, or an exposure of 2,000 DAC-hours, results in a committed effective dose equivalent of 0.05 Sv (5 rem) for radionuclides that have their ALIs or DACs based on the committed effective dose equivalent.

(b) For an ALI and the associated DAC determined by the nonstochastic organ dose limit of 0.50 Sv (50 rem), the intake of radionuclides that would result in a committed effective dose equivalent of 0.05 Sv (5 rem), that is, the stochastic ALI, is listed in parentheses in Table I of WAC 246-221-290. The licensee may, as a simplifying assumption, use the stochastic ALIs to determine committed effective dose equivalent. However, if the licensee uses the stochastic ALIs, the licensee shall also demonstrate that the limit in WAC 246-221-010 (1)(a)(ii) is met.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-030, filed 12/8/80; Order 1095, § 402-24-030, filed 2/6/76; Order 1, § 402-24-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-050 Occupational dose limits for minors. No licensee or registrant shall possess, use, or trans-

(2003 Ed.)

fer sources of radiation in such a manner as to cause any occupationally exposed individual who is under 18 years of age, to receive a dose in excess of 10 percent of the annual occupational dose limits specified in WAC 246-221-010(1).

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-050, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-035, filed 12/8/80; Order 1095, § 402-24-035, filed 2/6/76.]

WAC 246-221-055 Dose equivalent to an embryo/fetus. (1) The licensee or registrant shall ensure that the dose equivalent to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 5 mSv (0.5 rem).

(2) Once pregnancy has been declared, the licensee or registrant shall make every effort to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman in order to satisfy the limit in subsection (1) of this section.

(3) If by the time the woman declares pregnancy to the licensee or registrant, the dose equivalent to the embryo/fetus has exceeded 4.5 mSv (0.45 rem), the licensee or registrant shall be deemed to be in compliance with subsection (1) of this section if the additional dose equivalent to the embryo/fetus does not exceed 0.50 mSv (0.05 rem) during the remainder of the pregnancy.

(4) The dose equivalent to an embryo/fetus shall be taken as the sum of:

(a) The deep dose equivalent to the declared pregnant woman; and

(b) The dose equivalent to the embryo/fetus from radionuclides in the embryo/fetus and radionuclides in the declared pregnant woman.

(5) The licensee or registrant shall maintain the records of dose equivalent to an embryo/fetus with the records of dose equivalent to the declared pregnant woman. The declaration of pregnancy, including the estimated date of conception, shall also be kept on file, but may be maintained separately from the dose records.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-055, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-055, filed 12/9/93, effective 1/9/94.]

WAC 246-221-060 Dose limits for individual members of the public. (1) Each licensee or registrant shall conduct operations so that:

(a) The total effective dose equivalent to individual members of the public from the licensed or registered operation does not exceed 1 mSv (0.1 rem) in a year, exclusive of the dose contributions from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, from voluntary participation in medical research programs, and from the licensee's or registrant's disposal of radioactive material into sanitary sewerage in accordance with WAC 246-221-190; and

[Title 246 WAC—p. 211]

(b) The dose in any unrestricted area from external sources, exclusive of the dose contributions from patients administered radioactive material and released pursuant to chapters 246-239 and 246-240 WAC, does not exceed 0.02 mSv (0.002 rem) in any one hour.

(2) If the licensee or registrant permits members of the public to have access to restricted areas, they shall be escorted and the limits for members of the public continue to apply to those individuals.

(3) Notwithstanding subsection (1) of this section, a licensee or registrant may continue to operate a facility constructed and put into operation prior to January 1, 1994, where the annual dose limit for an individual member of the public is more than 1 mSv (0.1 rem) and less than 5 mSv (0.5 rem) total effective dose equivalent, provided:

(a) The facility's approved operating conditions for each radiation source remain the same. Any increase in the following operating conditions shall require reevaluation and/or modification of the facility shielding applicable to the source of radiation to meet the 1 mSv (0.1 rem) total effective dose equivalent limit for individual members of the public: size of the radiation source, workload, or occupancy factors associated with the source of radiation; and

(b) Any change in the permanent shielding of the facility due to remodeling, repair or replacement shall require the facility to meet the 1 mSv (0.1 rem) total effective dose equivalent limit for individual members of the public for areas affected by that portion of the shielding.

(4) Each licensee or registrant shall maintain records sufficient to demonstrate compliance with the dose limit for individual members of the public.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-221-060, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-060, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-040, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-040, filed 12/8/80; Order 1095, § 402-24-040, filed 2/6/76; Order 1, § 402-24-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-070 Compliance with dose limits for individual members of the public. (1) The licensee shall make or cause to be made surveys of radiation levels in unrestricted areas and radioactive materials in effluents released to unrestricted areas to demonstrate compliance with the dose limits for individual members of the public in WAC 246-221-060.

(2) A licensee shall show compliance with the annual dose limit in WAC 246-221-060 by:

(a) Demonstrating by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed operation does not exceed the annual dose limit; or

(b) Demonstrating that:

(i) The annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area do not exceed the values specified in Table II of WAC 246-221-290; and

(ii) If an individual were continually present in an unrestricted area, the dose from external sources would not exceed 0.02 mSv (0.002 rem) in an hour and 0.50 mSv (0.05 rem) in a year.

(3) Upon approval from the department, the licensee may adjust the effluent concentration values in WAC 246-221-290, Table II, for members of the public, to take into account the actual physical and chemical characteristics of the effluents, such as, aerosol size distribution, solubility, density, radioactive decay equilibrium, and chemical form.

(4) The provisions of this section do not apply to disposal of radioactive material into sanitary sewerage systems, which is governed by WAC 246-221-190.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-070, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-050, filed 12/11/86; Order 1095, § 402-24-050, filed 2/6/76; Order 1, § 402-24-050, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-080 Leak tests. (1) Each sealed radioactive source possessed under the provisions of a specific license, other than hydrogen-3 (tritium), with a half-life greater than thirty days and in any form other than gas, shall be tested and results obtained for leakage and/or contamination prior to initial use and at six-month intervals or as specified by the license, except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months. If at any other time there is reason to suspect that a sealed source might have been damaged, it shall be tested for leakage and results obtained before further use. In the absence of a certificate from a transferor indicating that a test for leakage has been made within six months prior to the transfer (three months for a source designed to emit alpha particles), the sealed source shall not be put into use until tested and the results received.

(2) Leak tests shall be capable of detecting the presence of 185 Bq (0.005 microcurie) of removable contamination. The results of leak tests made pursuant to subsection (1) of this section shall be recorded in units of becquerel or microcuries and shall be maintained for inspection by the department. Any test conducted pursuant to subsection (1) which reveals the presence of 185 Bq (0.005 microcurie) or more of removable contamination shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the source from use shall take action to prevent the spread of contamination and shall cause it to be decontaminated and repaired or to be disposed in accordance with WAC 246-232-080. If a sealed source shows evidence of leaking, a report shall be filed with the department within five days of the test, describing the equipment involved, the test results, and the corrective action taken.

(3) Test samples shall be taken from the sealed source or from the internal surfaces or the opening of the container in which the sealed source is stored or from surfaces of devices or equipment in which the sealed source is permanently mounted. Tests for contamination and leakage may be made by wiping appropriate accessible surfaces on which one might expect contamination to accumulate and measuring

these wipes for transferred contamination. Test samples shall also be taken from the interior surfaces of the container in which a sealed source of radium is stored.

(4) Leak tests are required for sealed radioactive sources that are greater than 3.7 MBq (100 microcuries) for beta and gamma emitting sources and greater than 370 KBq (10 microcuries) for sources designed to emit alpha particles.

(5) Tests for leakage or contamination shall be performed by persons specifically authorized by the department, an agreement state, a licensing state, or the United States Nuclear Regulatory Commission to perform such services.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-24-060, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-060, filed 12/8/80; Order 1095, § 402-24-060, filed 2/6/76; Order 1, § 402-24-060, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-090 Personnel monitoring for external dose. Each licensee or registrant shall monitor occupational exposure from sources of radiation at levels sufficient to demonstrate compliance with the occupational dose limits of WAC 246-221-010, 246-221-030, 246-221-050 and 246-221-055.

(1) Each licensee or registrant shall monitor occupational exposure to radiation from licensed (or registered) and unlicensed (or unregistered) radiation sources under the control of the licensee or registrant and shall supply and shall require the use of individual monitoring devices by:

(a) Each adult likely to receive, in one year from sources external to the body, a dose in excess of ten percent of the applicable limits specified in WAC 246-221-010(1).

(b) Each minor likely to receive, in one year from sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem), a lens dose equivalent in excess of 1.5 mSv (0.15 rem), or a shallow dose equivalent to the skin or to the extremities in excess of 5 mSv (0.5 rem).

(c) Each declared pregnant woman likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem). All of the occupational dose limits specified in WAC 246-221-010 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.

(d) Each individual who enters a high or very high radiation area.

(2) Personnel monitoring devices assigned to an individual:

(a) Shall not intentionally be exposed to give a false or erroneous reading;

(b) Shall be assigned to one individual per exposure interval (i.e., weekly, monthly) and used to determine exposure for that individual only;

(c) Shall not be worn by any individual other than that individual originally assigned to the device;

(d) Personnel monitoring devices that are exposed while not being worn by the assigned individual shall be processed and recorded as soon as possible. A replacement monitoring

device shall be assigned to the individual immediately. A record of the circumstances of the exposure shall be retained.

(3) All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremities, that require processing to determine the radiation dose and that are utilized by licensees or registrants to comply with subsection (1) of this section, with other applicable provisions of chapters 246-220 through 246-255 WAC, or with conditions specified in a licensee's license must be processed and evaluated by a dosimetry processor:

(a) Holding current personnel dosimetry accreditation from either the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology (formerly known as the National Bureau of Standards) or the United States Department of Energy Laboratory Accreditation Program for Personnel Dosimetry Systems (DOELAP); and

(b) Approved in this accreditation process for the type of radiation or radiations included in the NVLAP or DOELAP program that most closely approximate the type of radiation or radiations for which the individual wearing the dosimeter is monitored.

(4) For the purposes of this section "dosimetry processor" means an individual or an organization that processes and evaluates personnel monitoring devices in order to determine the radiation dose delivered to the device.

(5) Each licensee or registrant shall maintain records of doses received by all individuals for whom monitoring was required under subsection (1) of this section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:

(a) The deep dose equivalent to the whole body, lens dose equivalent, shallow dose equivalent to the skin, and shallow dose equivalent to the extremities; and

(b) The total effective dose equivalent when required by WAC 246-221-015; and

(c) The total of the deep dose equivalent and the committed dose to the organ receiving the highest total dose (total organ dose equivalent).

(6) The licensee or registrant shall maintain the records specified in subsection (5) of this section on department Form RHF-5A, in accordance with the instructions provided on the form, or in clear and legible records containing all the information required by Form RHF-5A; and shall update the information at least annually.

(7) Each licensee or registrant shall ensure that individuals, for whom they are required to monitor occupational doses in accordance with subsection (1) of this section, wear individual monitoring devices as follows:

(a) An individual monitoring device used for monitoring the dose to the whole body shall be worn at the unshielded or least shielded location of the whole body likely to receive the highest exposure. When a protective apron is worn, the location of the individual monitoring device is typically at the neck (collar).

(b) Any additional individual monitoring device used for monitoring the dose to an embryo/fetus of a declared pregnant woman, pursuant to WAC 246-221-055(1), shall be located at the waist under any protective apron being worn by the woman.

(c) An individual monitoring device used for monitoring the lens dose equivalent, to demonstrate compliance with WAC 246-221-010 (1)(b)(i), shall be located at the neck (collar), outside any protective apron being worn by the monitored individual, or at an unshielded location closer to the eye.

(d) An individual monitoring device used for monitoring the dose to the extremities, to demonstrate compliance with WAC 246-221-010 (1)(b)(ii), shall be worn on the extremity likely to receive the highest exposure. Each individual monitoring device shall be oriented to measure the highest dose to the extremity being monitored.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-090, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 92-06-008 (Order 245), § 246-221-090, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-070, filed 12/8/80; Order 1095, § 402-24-070, filed 2/6/76; Order 708, § 402-24-070, filed 8/24/72; Order 1, § 402-24-070, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-100 Personnel monitoring for internal dose. (1) Each licensee shall monitor, to determine compliance with WAC 246-221-040, the occupational intake of radioactive material by and assess the committed effective dose equivalent to:

(a) Adults likely to receive, in 1 year, an intake in excess of ten percent of the applicable ALI in Table I, Columns 1 and 2, of WAC 246-221-290;

(b) Minors likely to receive, in one year, a committed effective dose equivalent in excess of 1 mSv (0.1 rem); and

(c) Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 1 mSv (0.1 rem).

(2) Where necessary or desirable in order to aid in determining the extent of an individual's exposure to concentrations of radioactive material, the department may incorporate license provisions or issue an order requiring a licensee or registrant to make available to the individual appropriate bioassay services and to furnish a copy of the reports of such services to the department.

(3) Each licensee shall maintain records of doses received by all individuals for whom monitoring was required pursuant to subsections (1) and (2) of this section, and records of doses received during planned special exposures, accidents, and emergency conditions. Assessments of dose equivalent and records made using units in effect before January 1, 1994, need not be changed. These records shall include, when applicable:

(a) The estimated intake or body burden of radionuclides;

(b) The committed effective dose equivalent assigned to the intake or body burden of radionuclides;

(c) The specific information used to calculate the committed effective dose equivalent pursuant to WAC 246-221-040;

(d) The total effective dose equivalent when required by WAC 246-221-015; and

(e) The total of the deep dose equivalent and the committed dose to the organ receiving the highest total dose (total organ dose equivalent).

(4) The licensee or registrant shall maintain the records specified in subsection (3) of this section on department Form RHF-5A, in accordance with the instructions provided on the form, or in clear and legible records containing all the information required by Form RHF-5A; and shall update the information at least annually.

[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-100, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-100, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-100, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-080, filed 2/6/76; Order 1, § 402-24-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-102 Control of access to high radiation areas. (1) The licensee or registrant shall ensure that each entrance or access point to a high radiation area has one or more of the following features:

(a) A control device that, upon entry into the area, causes the level of radiation to be reduced below that level at which an individual might receive a deep dose equivalent of 1 mSv (0.1 rem) in one hour at thirty centimeters from the source of radiation or from any surface that the radiation penetrates; or

(b) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; or

(c) Entryways that are locked, except during periods when access to the areas is required, with positive control over each individual entry.

(2) In place of the controls required by subsection (1) of this section for a high radiation area, the licensee or registrant may substitute continuous direct or electronic surveillance that is capable of preventing unauthorized entry.

(3) The licensee or registrant may apply to the department for approval of alternative methods for controlling access to high radiation areas.

(4) The licensee or registrant shall establish the controls required by subsections (1) and (3) of this section in a way that does not prevent individuals from leaving a high radiation area.

(5) The licensee is not required to control each entrance or access point to a room or other area that is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the United States Department of Transportation provided that:

(a) The packages do not remain in the area longer than three days; and

(b) The dose rate at one meter from the external surface of any package does not exceed 0.1 mSv (0.01 rem) per hour.

(6) The licensee is not required to control entrance or access to rooms or other areas in hospitals solely because of the presence of patients containing radioactive material, pro-

vided that there are personnel in attendance who are taking the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the established limits and to operate within the ALARA provisions of the licensee's radiation protection program.

(7) The licensee or registrant is not required to control entrance or access to rooms or other areas as described in this section if the licensee or registrant has met all the specific requirements for access and control specified in other applicable chapters of these regulations, such as, chapter 246-243 WAC for industrial radiography, chapter 246-225 WAC for x-rays in the healing arts, and chapter 246-229 WAC for particle accelerators.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-102, filed 12/9/93, effective 1/9/94.]

WAC 246-221-104 Control of access to very high radiation areas. (1) In addition to the requirements in WAC 246-221-102, the licensee or registrant shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at five Gy (500 rad) or more in one hour at one meter from a source of radiation or any surface through which the radiation penetrates. This requirement does not apply to rooms or areas in which diagnostic x-ray systems are the only source of radiation, or to nonself-shielded irradiators.

(2) The licensee or registrant is not required to control entrance or access to rooms or other areas containing sources of radiation capable of producing a very high radiation area as described in this section if the licensee or registrant has met all the specific requirements for access and control specified in other applicable chapters of these regulations, such as, chapter 246-243 WAC for industrial radiography, chapter 246-225 WAC for x-rays in the healing arts, and chapter 246-229 WAC for particle accelerators.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-104, filed 12/9/93, effective 1/9/94.]

WAC 246-221-106 Control of access to very high radiation areas—Irradiators. (1) This section applies to licensees or registrants with sources of radiation in nonself-shielded irradiators. This section does not apply to sources of radiation that are used in teletherapy, in industrial radiography, or in completely self-shielded irradiators in which the source of radiation is both stored and operated within the same shielding radiation barrier and, in the designed configuration of the irradiator, is always physically inaccessible to any individual and cannot create a radiation level of five Gy (500 rad) or more in one hour at one meter in an area that is accessible to any individual.

(2) Each area in which there may exist radiation levels in excess of five Gy (500 rad) in one hour at one meter from a source of radiation that is used to irradiate materials shall meet the following requirements:

(a) Each entrance or access point shall be equipped with entry control devices which:

(i) Function automatically to prevent any individual from inadvertently entering a very high radiation area; and

(ii) Permit deliberate entry into the area only after a control device is actuated that causes the radiation level within the area, from the source of radiation, to be reduced below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour; and

(iii) Prevent operation of the source of radiation if it would produce radiation levels in the area that could result in a deep dose equivalent to an individual in excess of one mSv (0.1 rem) in one hour.

(b) Additional control devices shall be provided so that, upon failure of the entry control devices to function as required by (a) of this subsection:

(i) The radiation level within the area, from the source of radiation, is reduced below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour; and

(ii) Conspicuous visible and audible alarm signals are generated to make an individual attempting to enter the area aware of the hazard and at least one other authorized individual, who is physically present, familiar with the activity, and prepared to render or summon assistance, aware of the failure of the entry control devices.

(c) The licensee or registrant shall provide control devices so that, upon failure or removal of physical radiation barriers other than the sealed source's shielded storage container:

(i) The radiation level from the source of radiation is reduced below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour; and

(ii) Conspicuous visible and audible alarm signals are generated to make potentially affected individuals aware of the hazard and the licensee or registrant or at least one other individual, who is familiar with the activity and prepared to render or summon assistance, aware of the failure or removal of the physical barrier.

(d) When the shield for stored sealed sources is a liquid, the licensee shall provide means to monitor the integrity of the shield and to signal, automatically, loss of adequate shielding.

(e) Physical radiation barriers that comprise permanent structural components, such as walls, that have no credible probability of failure or removal in ordinary circumstances need not meet the requirements of (c) and (d) of this subsection.

(f) Each area shall be equipped with devices that will automatically generate conspicuous visible and audible alarm signals to alert personnel in the area before the source of radiation can be put into operation and in time for any individual in the area to operate a clearly identified control device, which must be installed in the area and which can prevent the source of radiation from being put into operation.

(g) Each area shall be controlled by use of such administrative procedures and such devices as are necessary to ensure that the area is cleared of personnel prior to each use of the source of radiation.

(h) Each area shall be checked by a radiation measurement to ensure that, prior to the first individual's entry into the area after any use of the source of radiation, the radiation

level from the source of radiation in the area is below that at which it would be possible for an individual to receive a deep dose equivalent in excess of one mSv (0.1 rem) in one hour.

(i) Entry and exit portals that are used in transporting materials to and from the irradiation area, and that are not intended for use by individuals, shall be controlled by such devices and administrative procedures as are necessary to physically protect and warn against inadvertent entry by any individual through these portals. Exit portals for irradiated materials shall be equipped to detect and signal the presence of any loose radioactive material that is carried toward such an exit and automatically to prevent loose radioactive material from being carried out of the area.

(3) The entry control devices required in subsection (2)(a) of this section shall be tested for proper functioning:

(a) Prior to initial operation with the source of radiation on any day, unless operations were continued uninterrupted from the previous day; and

(b) Prior to resumption of operation of the source of radiation after any unintentional interruption; and

(c) In accordance with a schedule for periodic tests of the entry control and warning systems submitted by the licensee or registrant and approved by the department.

(4) The licensee or registrant shall not conduct operations, other than those necessary to place the source of radiation in safe condition or to effect repairs on controls, unless control devices are functioning properly.

(5) Licensees, registrants, or applicants for licenses or registrations for sources of radiation within the purview of subsection (2) of this section which will be used in a variety of positions or in locations, such as open fields or forests, that make it impracticable to comply with certain requirements of subsection (2) of this section, such as those for the automatic control of radiation levels, may apply to the department for approval of alternative safety measures. Alternative safety measures shall provide personnel protection at least equivalent to those specified in subsection (2) of this section. At least one of the alternative measures shall include an entry-preventing interlock control based on a measurement of the radiation that ensures the absence of high radiation levels before an individual can gain access to the area where such sources of radiation are used.

(6) The entry control devices required by subsections (2) and (3) of this section shall be established in such a way that no individual will be prevented from leaving the area.

(7) The licensee shall maintain records of tests made pursuant to subsection (3) of this section on entry control devices for very high radiation areas. These records shall include the date, time, and results of each such test of function.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-106, filed 12/9/93, effective 1/9/94.]

WAC 246-221-110 Surveys. (1) Each licensee or registrant shall make or cause to be made such surveys, as defined in WAC 246-220-010, as may be necessary for the licensee or registrant to establish compliance with these regulations and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and potential radiation hazards. Records of such surveys shall be preserved as specified

in WAC 246-221-230. Information on performing surveys may be found in the United States Nuclear Regulatory Commission's Regulatory Guide 8.23.

(2) The licensee shall ensure that instruments and equipment used for quantitative radiation measurements, for example, dose rate and effluent monitoring, are calibrated annually at intervals not to exceed thirteen months for the radiation measured.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-110, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-110, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-110, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-085, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-085, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-085, filed 12/8/80; Order 1095, § 402-24-085, filed 2/6/76.]

WAC 246-221-113 Use of process, engineering or other controls. (1) The licensee shall use, to the extent practical, process or other engineering controls, such as, containment, decontamination, or ventilation, to control the concentrations of radioactive material in air.

(2) When it is not practical to apply process or other engineering controls to control the concentrations of radioactive material in air to values below those that define an airborne radioactivity area, the licensee shall, consistent with maintaining the total effective dose equivalent ALARA, increase monitoring and limit intakes by one or more of the following means:

- (a) Control of access;
- (b) Limitation of exposure times;
- (c) Use of respiratory protection equipment; or
- (d) Other controls.

(3) If the licensee performs an ALARA analysis to determine whether or not respirators should be used, the licensee may consider safety factors other than radiological factors. The licensee should also consider the impact of respirator use on workers' industrial health and safety.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-113, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-113, filed 12/9/93, effective 1/9/94.]

WAC 246-221-117 Use of individual respiratory protection equipment. If the licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material:

(1) The licensee shall use only respiratory protection equipment that is:

(a) Tested and certified by the National Institute for Occupational Safety and Health (NIOSH); or

(b) Approved by the department on the basis of the licensee's submittal of an application for authorized use of other respiratory protection equipment, including a demonstration by testing, or a demonstration on the basis of reliable test information, that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use.

(2) The licensee shall implement and maintain a respiratory protection program that includes:

(a) Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate exposures;

(b) Surveys and bioassays, as appropriate, to evaluate actual intakes;

(c) Testing of respirators for operability (user seal check for face sealing devices and functional check for others) immediately prior to each use;

(d) Written procedures regarding:

(i) Monitoring, including air sampling and bioassays;

(ii) Supervision and training of respirator users;

(iii) Fit testing;

(iv) Respirator selection;

(v) Breathing air quality;

(vi) Inventory and control;

(vii) Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;

(viii) Recordkeeping; and

(ix) Limitations on periods of respirator use and relief from respirator use;

(e) Determination by a physician that the individual user is medically fit to use respiratory protection equipment:

(i) Before the initial fitting of a face sealing respirator;

(ii) Before the first field use of nonface sealing respirators; and

(iii) Either every twelve months thereafter, or periodically at a frequency determined by a physician; and

(f) Fit testing, with a fit factor greater than or equal to ten times the APF for negative pressure devices, and a fit factor greater than or equal to five hundred for any positive pressure, continuous flow, and pressure-demand devices, before the first field use of tight fitting, face sealing respirators, and periodically thereafter at a frequency not to exceed one year. Fit testing must be performed with the facepiece operating in the negative pressure mode.

(3) The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other conditions that might require relief.

(4) The licensee shall also consider limitations appropriate to the type and mode of use. When selecting respiratory devices the licensee shall provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in such a way as not to interfere with the proper operation of the respirator.

(5) Standby rescue persons are required whenever one-piece atmosphere-supplying suits, or any combination of supplied air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself. The standby persons must be equipped with respiratory protection devices or other apparatus appropriate for the potential hazards. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, signal line, telephone, radio, or other suitable means), and be immediately available to assist them in case

(2003 Ed.)

of a failure of the air supply or for any other reason that requires relief from distress. A sufficient number of standby rescue persons must be immediately available to assist all users of this type of equipment and to provide effective emergency rescue if needed.

(6) Atmosphere-supplying respirators must be supplied with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of the Occupational Safety and Health Administration (29 CFR 1910.134 (i)(1)(ii)(A) through (E)). Grade D quality air criteria include:

(a) Oxygen content (v/v) of 19.5-23.5%;

(b) Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;

(c) Carbon monoxide (CO) content of 10 ppm or less;

(d) Carbon dioxide content of 1,000 ppm or less; and

(e) Lack of noticeable odor.

(7) The licensee shall ensure that no objects, materials or substances, such as facial hair, or any conditions that interfere with the face-to-facepiece seal or valve function, and that are under the control of the respirator wearer, are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator facepiece.

(8) In estimating the dose to individuals from intake of airborne radioactive materials, the concentration of radioactive material in the air that is inhaled when respirators are worn is initially assumed to be the ambient concentration in air without respiratory protection, divided by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the corrected value must be used. If the dose is later found to be less than the estimated dose, the corrected value may be used.

(9) The department may impose restrictions in addition to the provisions of this section, WAC 246-221-113 and 246-221-285, in order to:

(a) Ensure that the respiratory protection program of the licensee is adequate to limit doses to individuals from intakes of airborne radioactive materials consistent with maintaining total effective dose equivalent ALARA; and

(b) Limit the extent to which a licensee may use respiratory protection equipment instead of process or other engineering controls.

(10) The licensee shall obtain authorization from the department before using assigned protection factors in excess of those specified in WAC 246-221-285. The department may authorize a licensee to use higher assigned protection factors on receipt of an application that:

(a) Describes the situation for which a need exists for higher protection factors; and

(b) Demonstrates that the respiratory protection equipment provides these higher protection factors under the proposed conditions of use.

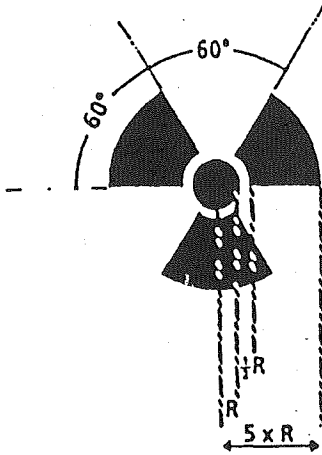
[Statutory Authority: RCW 70.98.050, 01-05-110, § 246-221-117, filed 2/21/01, effective 3/24/01; 98-13-034, § 246-221-117, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-117, filed 12/9/93, effective 1/9/94.]

WAC 246-221-120 Caution signs, and labels. (1) The radiation symbol shall be used on all signs, labels, or other

[Title 246 WAC—p. 217]

written means of warning individuals concerning radiation hazards.

(a) The symbol prescribed by this section is the conventional three-blade design: Radiation symbol



(b) The symbol prescribed by this section shall be:

- (i) Magenta, purple, or black on a yellow background; or
- (ii) Conspicuously etched or stamped without regard to a color requirement on sources, source holders or device components containing sources which are subjected to extreme environmental conditions which would cause the color to deteriorate.

(2) The conventional radiation symbol as described in subsection (1) of this section shall be used only for:

(a) Instructing individuals to be cognizant of a potential radiation hazard as prescribed in subsections (4) through (10) of this section.

(b) Indicating that information presented pertains to the topic of radiation.

(3) In addition to the contents of signs and labels prescribed in this section, a licensee or registrant may provide on or near such signs and labels any additional information which may be appropriate in aiding individuals to minimize exposure to radiation.

(4) Each *radiation area* and entrance thereto shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - RADIATION AREA. However, in an exceptionally large room where other activities of a nonradiological nature are conducted the entrance need not be posted provided a conspicuous barricade with an appropriate number of signs is established to delineate the radiation area.

(5) Each high radiation area and all entrances thereto shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - HIGH RADIATION AREA or DANGER - HIGH RADIATION AREA. To avoid unnecessary exposure, the licensee or registrant may satisfy this requirement by posting the sign at the estimated location or vicinity of the high radiation area.

(6) Each very high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution sym-

bol and the words: GRAVE DANGER - VERY HIGH RADIATION AREA. To avoid unnecessary exposure, the licensee or registrant may satisfy this requirement by posting the sign at the estimated location or vicinity of the very high radiation area.

(7) Each airborne radioactivity area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - AIRBORNE RADIOACTIVITY AREA or DANGER - AIRBORNE RADIOACTIVITY AREA.

(8) Each area or room in which any radioactive material is used or stored in an amount exceeding 10 times the quantity of radioactive material specified in WAC 246-221-300 shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION* - RADIOACTIVE MATERIAL or DANGER - RADIOACTIVE MATERIAL.

(9) Each container of radioactive material shall bear a durable, clearly visible label identifying the radioactive contents including:

(a) The radiation caution symbol and the words: CAUTION* - RADIOACTIVE MATERIAL or DANGER - RADIOACTIVE MATERIAL.

(b) Sufficient information to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures, such as radionuclides present, radiation levels, estimate of activity and mass enrichment.

(c) Where containers are used for storage, the quantities and kinds of radioactive materials in the containers and the date of measurement of the quantities.

(10) All radiation machines shall be labeled in a conspicuous manner so as to caution individuals that radiation is produced when the machine is being operated.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-120, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-090, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-090, filed 12/8/80; Order 1095, § 402-24-090, filed 2/6/76; Order 1, § 402-24-090, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-130 Exceptions from posting and labeling requirements. (1) A room or area is not required to be posted with a caution sign because of the presence of a sealed source, provided the radiation level 30 centimeters from the surface of the source container or housing does not exceed 0.05 mSv (five millirem) per hour.

(2) Rooms or other areas in hospitals that are occupied by patients are not required to be posted with caution signs because of the presence of patients containing radioactive material provided that the patient could be released from licensee control pursuant to chapters 246-239 and 246-240 WAC.

(3) Caution signs are not required to be posted in areas or rooms containing radioactive material for periods of less than eight hours provided that:

(a) The material is constantly attended during such periods by an individual who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in this part; and

(b) Such area or room is subject to the licensee's or registrant's control.

(4) A room or other area is not required to be posted with a caution sign because of the presence of radioactive material prepared for transport and packaged and labeled in accordance with regulations of the United States Department of Transportation.

(5) A room or area is not required to be posted with a caution sign because of the presence of a diagnostic x-ray system used solely for healing arts purposes.

(6) The interior of a teletherapy room is not required to be posted with caution signs provided such posting is conspicuously placed at the entrance(s) to the rooms.

(7) A licensee is not required to label:

(a) Containers holding licensed material in quantities less than the quantities listed in WAC 246-221-300; or

(b) Containers holding licensed material in concentrations less than those specified in WAC 246-221-290, Table III; or

(c) Containers attended by an individual who takes the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established by this chapter; or

(d) Containers when they are in transport and packaged and labeled in accordance with the regulations of the United States Department of Transportation; or

(e) Containers such as those located in water-filled canals, storage vaults, or hot cells, that are accessible only to individuals authorized to handle or use them, or to work in the vicinity of the containers, provided the contents are identified to these individuals by a readily available written record. The record shall be retained as long as the containers are in use for the purpose indicated on the record; or

(f) Installed manufacturing or process equipment, such as chemical process equipment, piping, and tanks.

(8) Each licensee, prior to removal or disposal of empty uncontaminated containers to unrestricted areas, shall remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-221-130, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-221-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-095, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-095, filed 12/8/80; Order 1095, § 402-24-095, filed 2/6/76.]

WAC 246-221-140 Instruction of personnel. Instructions required for individuals working in or frequenting any portion of a restricted area are specified in WAC 246-222-020, 246-222-030, and 246-222-040.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-110, filed 9/16/83; Order 1095, § 402-24-110, filed 2/6/76; Order 708, § 402-24-110, filed 8/24/72; Order 1, § 402-24-110, filed 7/2/71; Order 1, § 402-24-110, filed 1/8/69; Rules (part), filed 10/26/66.]

(2003 Ed.)

WAC 246-221-150 Security and control of stored radioactive material and radiation machines. (1) Licensed radioactive materials and registered radiation machines shall be secured from, or controlled in such a manner so as to prevent, unauthorized access or removal from the place of storage.

(2) Licensed radioactive materials in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee.

(3) Registered radiation machines in an unrestricted area and not in storage shall be under the control of the registrant.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-150, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-120, filed 9/16/83; Order 1095, § 402-24-120, filed 2/6/76; Order 1, § 402-24-120, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-160 Procedures for picking up, receiving, and opening packages. (1)(a) Each licensee who expects to receive a package containing quantities of radioactive material in excess of the Type A₁ or A₂ quantities specified in WAC 246-231-200 shall make arrangements to receive:

(i) The package when it is offered for delivery by the carrier; or

(ii) Immediate notification from the carrier of the arrival of the package at the carrier's terminal.

(b) Each licensee who picks up a package of radioactive material from a carrier's terminal shall pick up the package expeditiously upon receipt of notification from the carrier of its arrival.

(2) Each licensee shall:

(a) Monitor for radioactive contamination the external surfaces of any package labeled with a Radioactive White I, Yellow II or Yellow III label unless the package contains only radioactive material in the form of gas or in special form as defined in WAC 246-231-010; and

(b) Monitor the radiation levels of the external surfaces of any package labeled with a Radioactive White I, Yellow II or Yellow III label unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, as defined in WAC 246-231-200; and

(c) Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if the package has evidence of potential contamination, such as packages that are crushed, wet, or damaged.

(3) The monitoring shall be performed:

(a) Immediately upon receipt if there is evidence of package degradation or any other evidence of potential contamination or excessive radiation levels; or

(b) As soon as practicable after receipt, but no later than three hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or no later than three hours from the beginning of the next working day if received after normal working hours.

(4) The licensee shall immediately notify the final delivery carrier and, by telephone and telegram, mailgram, or facsimile, the department when:

[Title 246 WAC—p. 219]

(a) For normal shipments, removable radioactive surface contamination exceeds either 22 dpm/cm² for beta-gamma emitting radionuclides, all radionuclides with half-lives less than ten days, natural uranium, natural thorium, uranium-235, uranium-238, thorium-232, and thorium-228 and thorium 230 when contained in ores or concentrates; or 2.2 dpm/cm² for all other alpha emitting radionuclides; or

(b) For exclusive use shipments, removable radioactive surface contamination exceeds either 220 dpm/cm² for beta-gamma emitting radionuclides, all radionuclides with half-lives less than ten days, natural uranium, natural thorium, uranium-235, uranium-238, thorium-232, and thorium-228 and thorium 230 when contained in ores or concentrates; or 22 dpm/cm² for all other alpha emitting radionuclides; or

(c) For normal or exclusive use shipments, external radiation levels exceed two mSv/hour (200 millirem per hour) at any point on the external surface of the package; or

(d) For exclusive use shipments where the shipment is made in a closed transport vehicle, packages are secured in a fixed position, and no loading or unloading occurs between the beginning and end of transportation, external radiation levels exceed ten mSv/hour (1000 millirem per hour) at any point on the external surface of the package.

(5) Each licensee shall establish and maintain procedures for safely opening packages in which radioactive material is received, and shall assure that such procedures are followed and that due consideration is given to instructions for the type of package being opened and the monitoring of potentially contaminated packaging material (including packages containing radioactive material in gaseous form) to assure that only background levels of radiation are present prior to disposal of such material as nonradioactive waste.

(6) Licensees transferring special form sources to and from a work site in vehicles owned or operated by the licensee are exempt from the contamination monitoring requirements of subsection (2)(a) of this section but are not exempt from the monitoring requirement in subsection (2)(b) of this section for measuring radiation levels to ensure that the source is still properly lodged in its shield.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-221-160, filed 7/21/99, effective 8/21/99; 94-01-073, § 246-221-160, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-160, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-24-125, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-125, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-125, filed 12/8/80; Order 1095, § 402-24-125, filed 2/6/76.]

WAC 246-221-170 Waste disposal, general requirement. (1) No licensee shall dispose of any radioactive material except:

(a) By transfer to an authorized recipient as provided in WAC 246-232-080, or chapter 246-249 WAC; or

(b) As authorized pursuant to WAC 246-221-070, 246-221-180, 246-221-190, 246-221-200, 246-221-210, or 246-221-220.

(c) By decay in storage as authorized in a specific license.

[Title 246 WAC—p. 220]

(2) A person shall be specifically licensed to receive waste containing licensed material from other persons for:

(a) Treatment prior to disposal; or

(b) Treatment or disposal by incineration; or

(c) Decay in storage; or

(d) Disposal at a land disposal facility licensed pursuant to chapter 246-250 WAC; or

(e) Storage until transferred to a disposal facility authorized to receive the waste.

(3) Nothing in chapter 246-221 WAC relieves the licensee from complying with other applicable federal, state, and local regulations governing any other toxic or hazardous properties of materials that may be disposed pursuant to this chapter.

(4) Each licensee shall maintain records of all transfers and disposals of radioactive material. Requirements for the disposition of certain disposal records, prior to license termination, are located in WAC 246-232-060.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-221-170, filed 7/21/99, effective 8/21/99; 94-01-073, § 246-221-170, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-170, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-130, filed 12/8/80; Order 1095, § 402-24-130, filed 2/6/76; Order 1, § 402-24-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-180 Method of obtaining approval of proposed disposal procedures. Any person may apply to the department for approval of proposed procedures to dispose of radioactive material in a manner not otherwise authorized in this chapter. Each application shall contain a description of the radioactive material, including the quantities and kinds of radioactive material and levels of radioactivity involved, the physical and chemical properties that have an impact on risk evaluation, and the proposed manner and conditions of disposal. The application, where appropriate, shall also include an analysis and evaluation of pertinent information as to the nature of the environment, including topographical, geological, meteorological, and hydrological characteristics; usage of ground and surface waters in the general area; the nature and location of other potentially affected facilities; analyses and procedures to ensure that doses are maintained ALARA within the dose limits of this chapter; and procedures to be observed to minimize the risk of unexpected or hazardous exposures.

The department will not approve any application for a license to receive radioactive material from other persons for disposal on land not owned by a state or the federal government.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-180, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-24-135, filed 12/11/86; Order 1095, § 402-24-135, filed 2/6/76.]

WAC 246-221-190 Disposal by release into sanitary sewerage systems. (1) No licensee shall discharge radioactive material into a sanitary sewerage system unless:

(a) It is readily soluble or it is biological material which is readily dispersible in water;

(b) The quantity of any radioactive material released in any one month, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in WAC 246-221-290, Table III; and

(c) The sum of the fractions for each radionuclide, if more than one radionuclide is released, will not exceed unity; where the fraction for each radionuclide is determined by dividing the actual monthly average concentration of each radionuclide released by the licensee into the sewer by the concentration of that radionuclide listed in Table III of WAC 246-221-290; and

(d) The total quantity of licensed and other radioactive material that the licensee releases into the sanitary sewerage system in a year does not exceed 185 GBq (5 Ci) of hydrogen-3, 37 GBq (1 Ci) of carbon-14, and 37 GBq (1 Ci) of all other radioactive materials combined.

(2) Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this section.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-190, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-190, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-140, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-140, filed 12/8/80; Order 1095, § 402-24-140, filed 2/6/76; Order 1, § 402-24-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-200 Disposal by burial in soil. No licensee shall dispose of radioactive material by burial in soil except as specifically approved by the department pursuant to WAC 246-221-180.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-200, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-150, filed 12/8/80; Order 1095, § 402-24-150, filed 2/6/76; Order 1, § 402-24-150, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-210 Disposal by incineration. No licensee shall incinerate radioactive material for the purpose of disposal or preparation for disposal except as specifically approved by the department pursuant to WAC 246-221-070 and 246-221-180.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-210, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-210, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-160, filed 2/6/76; Order 1, § 402-24-160, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-220 Disposal of specific wastes. (1) Any licensee may dispose of the following licensed material without regard to its radioactivity:

(a) 1.85 KBq (0.05 microcuries) or less of hydrogen-3 or carbon-14, per gram of medium, used for liquid scintillation counting; and

(b) 1.85 KBq (0.05 microcuries) or less of hydrogen-3 or carbon-14, per gram of animal tissue averaged over the weight of the entire animal.

(2003 Ed.)

(2) The licensee shall not dispose of tissue under this section in a manner that would permit its use either as food for humans or as animal feed; and

(3) Nothing in this section, however, relieves the licensee of maintaining records showing the receipt, transfer and disposal of such byproduct material as specified in WAC 246-220-020; and

(4) Nothing in this section relieves the licensee from complying with other applicable federal, state and local regulations governing any other toxic or hazardous property of these materials.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-220, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-221-220, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-221-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-24-165, filed 9/16/83.]

WAC 246-221-230 Records important to radiation safety. (1) Each licensee or registrant shall make and retain records of activities, program reviews, measurements, and calculations which may be necessary to determine the extent of occupational and public exposure from sources of radiation under the control of the licensee or registrant.

(2) Each record required by this section shall be legible throughout the specified retention period.

(3) Each licensee or registrant shall use the SI units: Becquerel, gray, sievert and coulomb per kilogram, or the special units: Curie, rad, rem, and roentgen, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by these regulations.

(4) The licensee or registrant shall make a clear distinction among the quantities entered on the records required by these regulations such as, total effective dose equivalent, total organ dose equivalent, shallow dose equivalent, lens dose equivalent, deep dose equivalent, or committed effective dose equivalent.

(5) Records which must be maintained under this part shall be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by department regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Electronic media data storage systems shall incorporate standard or universally recognized security measures. Records, such as letters, drawings, and specifications, shall include all pertinent information, such as stamps, initials, and signatures.

(6) The licensee shall maintain adequate safeguards against tampering with and loss of records.

(7) The licensee or registrant shall retain the following required records until the department terminates each pertinent license or registration requiring the record, and upon termination of the license or registration, the licensee or registrant shall store for at least thirty years:

(a) Records of prior occupational dose and exposure history as recorded on department Form RHF-4 or RHF-4A, or equivalent;

[Title 246 WAC—p. 221]

(b) Records on department Form RHF-5 or RHF-5A, or equivalent, of doses received by all individuals for whom monitoring was required pursuant to WAC 246-221-090 and 246-221-100;

(c) Records of doses received during planned special exposures, accidents, and emergency conditions;

(d) The specific information used to calculate the committed effective dose equivalent pursuant to WAC 246-221-040(3);

(e) Records of the results of surveys to determine the dose from external sources of radiation used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents;

(f) Records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose;

(g) Records showing the results of air sampling, surveys, and bioassays required pursuant to WAC 246-221-117 (1)(b)(i) and (ii);

(h) Records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment.

(8) The licensee or registrant shall retain the following records until the department terminates the pertinent license or registration requiring the record:

(a) Records of waste disposal made under the provisions of WAC 246-221-180, 246-221-190, 246-221-210 and 246-221-220, chapter 246-249 WAC, and any burials in soil as previously authorized;

(b) Records of dose to individual members of the public as required by WAC 246-221-060(4);

(c) Records of the provisions of the radiation protection program as required by WAC 246-221-005.

(9) The licensee or registrant shall retain the following records for three years after the record is made:

(a) Records of testing entry control devices for very high radiation areas as required by WAC 246-221-106(3);

(b) Records used in preparing department Form RHF-4 or RHF-4A;

(c) Records showing the results of general surveys required by WAC 246-221-110 and package surveys required by WAC 246-221-160;

(d) Records of calibrations required by WAC 246-221-110;

(e) Records of program audits and other reviews of the content and implementation of the radiation protection program required by WAC 246-221-005;

(f) Records of waste disposal by decay in storage.

(10) If there is a conflict between the department's regulations in this part, license condition, or other written department approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the department, under WAC 246-220-050, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

(11) The discontinuance or curtailment of activities does not relieve the licensee or registrant of responsibility for retaining all records required by this section.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-230, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-230, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-230, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-170, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-170, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-170, filed 12/8/80; Order 1095, § 402-24-170, filed 2/6/76; Order 708, § 402-24-170, filed 8/24/72; Order 1, § 402-24-170, filed 7/2/71; Order 1, § 402-24-170, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-240 Reports of stolen, lost or missing radiation sources. (1) Each licensee and/or registrant shall report by telephone (206/682-5327) and confirm promptly by letter, telegram, mailgram, or facsimile to the State Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827.

(a) Immediately after its occurrence becomes known to the licensee, stolen, lost, or missing radioactive material in an aggregate quantity equal to or greater than one thousand times the quantity specified in WAC 246-221-300; or

(b) Within thirty days after its occurrence becomes known to the licensee, lost, stolen, or missing radioactive material in an aggregate quantity greater than ten times the quantity specified in Appendix C that is still missing or any item not exempted in chapter 246-232 WAC; or

(c) Immediately after its occurrence becomes known to the registrant, a stolen, lost, or missing radiation machine.

(2) Each licensee or registrant required to make a report pursuant to subsection (1) of this section shall, within thirty days after making the telephone report, make a written report to the department setting forth the following information:

(a) A description of the licensed or registered source of radiation involved, including, for radioactive material, the kind, quantity, and chemical and physical form; and, for radiation machines, the manufacturer, model and serial number, type and maximum energy of radiation emitted; and

(b) A description of the circumstances under which the loss or theft occurred; and

(c) A statement of disposition, or probable disposition, of the licensed or registered source of radiation involved; and

(d) Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas; and

(e) Actions that have been taken, or will be taken, to recover the source of radiation; and

(f) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed or registered sources of radiation.

(3) Subsequent to filing the written report, the licensee or registrant shall also report additional substantive information on the loss or theft within thirty days after the licensee or registrant learns of such information.

(4) The licensee or registrant shall prepare any report filed with the department pursuant to this section so that names of individuals who may have received exposure to radiation are stated in a separate and detachable portion of the report.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-240, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.-

080.91-15-112 (Order 184), § 246-221-240, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-180, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-180, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-180, filed 12/8/80; Order 1095, § 402-24-180, filed 2/6/76; Order 708, § 402-24-180, filed 8/24/72; Order 1, § 402-24-180, filed 7/2/71; Order 1, § 402-24-180, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-250 Notification of incidents. (1)

Immediate notification. Notwithstanding other requirements for notification, each licensee and/or registrant shall immediately (as soon as possible but no later than four hours after discovery of an incident) notify the State Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827, by telephone (206/682-5327) and confirming letter, telegram, mailgram, or facsimile of any incident involving any radiation source which may have caused or threatens to cause:

(a) An individual to receive:

(i) A total effective dose equivalent of 0.25 Sv (25 rem) or more;

(ii) A lens dose equivalent of 0.75 Sv (75 rem) or more;

(iii) A shallow dose equivalent to the skin or extremities or a total organ dose equivalent of 2.5 Sv (250 rem) or more;

(b) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for twenty-four hours, the individual could have received an intake five times the occupational ALI. This provision does not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures; or

(c) The loss of ability to take immediate protective actions necessary to avoid exposure to sources of radiation or releases of radioactive material that could exceed regulatory limits. Events which could cause such a loss of ability include fires, explosions, toxic gas releases, etc.

(2) **Twenty-four hour notification.** Each licensee and/or registrant shall within twenty-four hours of discovery of the event, notify the State Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827, by telephone (206/682-5327) and confirming letter, telegram, mailgram, or facsimile of any incident involving any radiation source possessed which may have caused or threatens to cause:

(a) An individual to receive, in a period of twenty-four hours:

(i) A total effective dose equivalent exceeding 0.05 Sv (5 rem);

(ii) A lens dose equivalent exceeding 0.15 Sv (15 rem);

(iii) A shallow dose equivalent to the skin or extremities or a total organ dose equivalent exceeding 0.5 Sv (50 rem);

(b) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for twenty-four hours, the individual could have received an intake in excess of one occupational ALI. This provision does not apply to locations where personnel are not normally sta-

tioned during routine operations, such as hot-cells or process enclosures;

(c) An unplanned contamination incident that:

(i) Requires access to the contaminated area, by workers or the general public, to be restricted for more than twenty-four hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) Involves a quantity of material greater than five times the lowest annual limit on intake specified in WAC 246-221-290; and

(iii) Has access to the area restricted for a reason other than to allow radionuclides with a half-life of less than twenty-four hours to decay prior to decontamination;

(d) Equipment failure or inability to function as designed when:

(i) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive material exceeding regulatory limits or to mitigate the consequences of an accident;

(ii) The equipment is required to be available and operable at the time it becomes disabled or fails to function; and

(iii) No redundant equipment is available and operable to perform the required safety functions;

(e) An unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body; or

(f) An unplanned fire or explosion damaging any radioactive material or any device, container or equipment containing radioactive material when:

(i) The quantity of radioactive material involved is greater than five times the lowest annual limit on intake specified in WAC 246-221-290; and

(ii) The damage affects the integrity of the radioactive material or its container.

(3) For each occurrence requiring notification pursuant to this section, a prompt investigation of the situation shall be initiated by the licensee/registrant. A written report of the findings of the investigation shall be sent to the department within thirty days.

(4) The licensee or registrant shall prepare each report filed with the department under this section so that names of individuals who have received exposure to sources of radiation are stated in a separate and detachable portion of the report.

Any report filed with the department under this section shall contain the information described in WAC 246-221-260 (2) and (3).

(5) The provisions of this section do not apply to doses that result from planned special exposures, provided such doses are within the limits for planned special exposures and are reported pursuant to WAC 246-221-265.

(6) Telephone notifications that do not involve immediate or twenty-four hour notification should be made to the Olympia office (360 236-3300).

(7) Telephone notification required under this section shall include, to the extent that the information is available at the time of notification:

(a) The caller's name and call-back telephone number;

(b) A description of the incident including date and time;

- (c) The exact location of the incident;
- (d) The radionuclides, quantities, and chemical and physical forms of the radioactive materials involved; and
- (e) Any personnel radiation exposure data available.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-250, filed 2/21/01, effective 3/24/01; 98-13-037, § 246-221-250, filed 6/8/98, effective 7/9/98; 95-01-108, § 246-221-250, filed 12/21/94, effective 1/21/95; 94-01-073, § 246-221-250, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-250, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-190, filed 12/11/86; 83-19-050 (Order 2026), § 402-24-190, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-190, filed 12/8/80; Order 1095, § 402-24-190, filed 2/6/76; Order 708, § 402-24-190, filed 8/24/72; Order 1, § 402-24-190, filed 7/2/71; Order 1, § 402-24-190, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-260 Reports of overexposures and excessive levels and concentrations. (1) In addition to any notification required by WAC 246-221-250, each licensee or registrant shall submit a written report to the department within thirty days after learning of any of the following occurrences:

(a) Incidents for which notification is required by WAC 246-221-250; or

(b) Doses in excess of any of the following:

(i) The occupational dose limits for adults in WAC 246-221-010; or

(ii) The occupational dose limits for a minor in WAC 246-221-050; or

(iii) The limits for an embryo/fetus of a declared pregnant woman in WAC 246-221-055; or

(iv) The limits for an individual member of the public in WAC 246-221-060; or

(v) Any applicable limit in the license; or

(vi) The ALARA constraints for air emissions established under WAC 246-221-005; or

(c) Levels of radiation or concentrations of radioactive material in:

(i) A restricted area in excess of applicable limits in the license; or

(ii) An unrestricted area in excess of ten times the applicable limit set forth in this chapter or in the license or registration, whether or not involving exposure of any individual in excess of the limits in WAC 246-221-060; or

(d) For source materials milling licensees and nuclear power plants subject to the provisions of United States Environmental Protection Agency's generally applicable environmental radiation standards in 40 CFR 190, levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards.

(2) Each report required by subsection (1) of this section shall describe:

(a) The incident and its exact location, time and date;

(b) The extent of exposure of individuals to radiation or to radioactive material, including estimates of each individual's dose as required by subsection (3) of this section;

(c) Levels of radiation and concentrations of radioactive material involved, including the radionuclides, quantities, and chemical and physical form;

(d) The cause or probable cause of the exposure, levels of radiation or concentrations;

(e) The manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(f) The results of any evaluations or assessments; and

(g) Corrective steps taken or planned to assure against a recurrence, including the schedule for achieving conformance with applicable limits, ALARA constraints, generally applicable environmental standards, and associated license conditions.

(3) Each report filed with the department pursuant to this section shall include for each individual exposed the name, social security number, and date of birth, and an estimate of the individual's dose. With respect to the limit for the embryo/fetus in WAC 246-221-055, the identifiers should be those of the declared pregnant woman. The report shall be prepared so that this information is stated in a separate and detachable part of the report.

(4) Individuals shall be notified of reports in accordance with the requirements of WAC 246-222-040.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-221-260, filed 7/21/99, effective 8/21/99; 95-01-108, § 246-221-260, filed 12/21/94, effective 1/21/95; 94-01-073, § 246-221-260, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-260, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-260, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-200, filed 12/8/80; Order 1095, § 402-24-200, filed 2/6/76; Order 708, § 402-24-200, filed 8/24/72; Order 1, § 402-24-200, filed 7/2/71; Order 1, § 402-24-200, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-265 Special reports to the department—Planned special exposures and leaking sources. (1) The licensee or registrant shall submit a written report to the department within thirty days following any planned special exposure conducted in accordance with WAC 246-221-030. The written report shall:

(a) Inform the department that a planned special exposure was conducted;

(b) Indicate the date the planned special exposure occurred; and

(c) Provide the information required by WAC 246-221-030.

(2) The licensee shall file a written report with the department within five days after learning that a sealed source is leaking or contaminated. The report shall describe:

(a) The source;

(b) The source holder;

(c) The equipment in which the source is installed;

(d) The test results; and

(e) The corrective action taken.

[Statutory Authority: RCW 70.98.050. 99-05-013, § 246-221-265, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-221-265, filed 12/9/93, effective 1/9/94.]

WAC 246-221-270 Vacating premises and release of equipment. (1) Each specific licensee shall notify the department in writing of intent to vacate, at least 30 days before vacating or relinquishing possession or control of premises which may have been contaminated with radioactive material as a result of licensed activities.

(2) Each licensee shall permanently decontaminate the premise, before vacating any premise or transferring the premise, in accordance with the standards specified in chapter 246-246 WAC. A survey by the licensee shall be made after the decontamination and the department and the landlord or subsequent tenant or transferee shall be provided with a copy of the survey no later than the date of vacating or relinquishing possession or control of the premise.

(3) No machinery, instruments, laboratory equipment or any other property used in contact with, or close proximity to radioactive material at a licensed premise shall be assigned, sold, leased, or transferred to an unlicensed person unless the property has been decontaminated and meets the standards specified in WAC 246-232-140. A survey shall be made after the decontamination and the department and subsequent owner or transferee shall be provided with a copy of the survey report.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-221-270, filed 3/15/00, effective 4/15/00; 94-01-073, § 246-221-270, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-270, filed 12/27/90, effective 1/31/91; Order 1095, § 402-24-210, filed 2/6/76; Order 1, § 402-24-210, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-221-275 Notification of changes in a facility. Each licensee or registrant shall notify the department of changes in any room or area in a facility where a source of radiation is used. Changes of interest to the department

include, but are not limited to, new or replacement equipment containing or emitting radiation, increased occupancy, repair or replacement of existing shielding, new shielding, alteration of the ventilation system, and changes in procedures done in the room or area.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-275, filed 12/9/93, effective 1/9/94.]

WAC 246-221-280 Notifications and reports to individuals. (1) Requirements for notification and reports to individuals of exposure to radiation or radioactive material are specified in WAC 246-222-040.

(2) When a licensee or registrant is required pursuant to WAC 246-221-260 to report to the department any exposure of an identified occupationally exposed individual, or an identified member of the public, or dosimetry device assigned to any individual to radiation from any source, the licensee or registrant shall also notify the individual. Such notice shall be transmitted at a time not later than the transmittal to the department, and shall comply with the provisions of WAC 246-222-040(1).

[Statutory Authority: RCW 70.98.050. 99-05-012, § 246-221-280, filed 2/5/99, effective 3/8/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-280, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-280, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-24-215, filed 12/11/86; Order 1095, § 402-24-215, filed 2/6/76.]

WAC 246-221-285 Assigned protection factors for respirators. ^a

	Operating mode	Assigned Protection Factors
I. Air-Purifying Respirators (Particulate ^b only) ^c:		
Filtering facepiece disposable ^d	Negative Pressure.	(^d)
Facepiece, half ^e	Negative Pressure.	10
Facepiece, full.	Negative Pressure.	100
Facepiece, half.	Powered air-purifying respirators	50
Facepiece, full.	Powered air-purifying respirators	1000
Helmet/hood.	Powered air-purifying respirators	1000
Facepiece, loose-fitting.	Powered air-purifying respirators	25
II. Atmosphere-Supplying Respirators (Particulate, gases and vapors ^f):		
1. Air-line respirator:		
Facepiece, half.	Demand.	10
Facepiece, half.	Continuous Flow.	50
Facepiece, half.	Pressure Demand.	50
Facepiece, full.	Demand.	100
Facepiece, full.	Continuous Flow.	1000
Facepiece, full.	Pressure Demand.	1000
Helmet/hood.	Continuous Flow.	1000
Facepiece, loose-fitting.	Continuous Flow.	25
Suit.	Continuous Flow.	(^g)
2. Self-contained breathing apparatus (SCBA):		
Facepiece, full.	Demand.	^h 100
Facepiece, full.	Pressure Demand.	^h 10,000
Facepiece, full.	Demand, Recirculating.	^h 100
Facepiece, full.	Positive Pressure Recirculating.	^h 10,000
III. Combination Respirators:		
Any combination of air-purifying and atmosphere-supplying respirators.	Assigned protection factor for type and mode of operation as listed above.	

- a These assigned protection factors apply only in a respiratory protection program that meets the requirements of this chapter. They are applicable only to airborne radiological hazards and may not be appropriate to circumstances when chemical or other respiratory hazards exist instead of, or in addition to, radioactive hazards. Selection and use of respirators for these circumstances must also comply with Department of Labor regulations. Radioactive contaminants for which the concentration values in Table I, Column 3 of WAC 246-221-290, Appendix A, are based on internal dose due to inhalation may, in addition, present external exposure hazards at higher concentrations. Under these circumstances, limitations on occupancy may have to be governed by external dose limits.
- b Air-purifying respirators with APF <100 must be equipped with particulate filters that are at least 95 percent efficient. Air-purifying respirators with APF = 100 must be equipped with particulate filters that are at least 99 percent efficient. Air-purifying respirators with APFs >100 must be equipped with particulate filters that are at least 99.97 percent efficient.
- c The licensee may apply to the department for the use of an APF greater than 1 for sorbent cartridges as protection against airborne radioactive gases and vapors (e.g., radiiodine).
- d Licensees may permit individuals to use this type of respirator who have not been medically screened or fit tested on the device provided that no credit be taken for their use in estimating intake or dose. It is also recognized that it is difficult to perform an effective positive or negative pressure preuse user seal check on this type of device. All other respiratory protection program requirements listed in WAC 246-221-117 apply. An assigned protection factor has not been assigned for these devices. However, an APF equal to 10 may be used if the licensee can demonstrate a fit factor of at least 100 by use of a validated or evaluated, qualitative or quantitative fit test.
- e Under-chin type only. No distinction is made in this section between elastomeric half-masks with replaceable cartridges and those designed with the filter medium as an integral part of the facepiece (e.g., disposable or reusable disposable). Both types are acceptable so long as the seal area of the latter contains some substantial type of seal-enhancing material such as rubber or plastic, the two or more suspension straps are adjustable, the filter medium is at least 95 percent efficient and all other requirements of this part are met.
- f The assigned protection factors for gases and vapors are not applicable to radioactive contaminants that present an absorption or submersion hazard. For tritium oxide vapor, approximately one-third of the intake occurs by absorption through the skin so that an overall protection factor of 3 is appropriate when atmosphere-supplying respirators are used to protect against tritium oxide. Exposure to radioactive noble gases is not considered a significant respiratory hazard, and protective actions for these contaminants should be based on external (submersion) dose considerations.
- g No NIOSH approval schedule is currently available for atmosphere-supplying suits. This equipment may be used in an acceptable respiratory protection program as long as all the other minimum program requirements, with the exception of fit testing, are met (i.e., WAC 246-221-117).
- h The licensee should implement institutional controls to assure that these devices are not used in areas immediately dangerous to life or health (IDLH).
- i This type of respirator may be used as an emergency device in unknown concentrations for protection against inhalation hazards. External radiation hazards and other limitations to permitted exposure such as skin absorption shall be taken into account in these circumstances. This device may not be used by any individual who experiences perceptible outward leakage of breathing gas while wearing the device.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-221-285, filed 2/21/01, effective 3/24/01; 94-01-073, § 246-221-285, filed 12/9/93, effective 1/9/94.]

WAC 246-221-290 Appendix A—Annual limits on intake (ALI) and derived air concentrations (DAC) of radionuclides for occupational exposure; effluent concentrations; concentrations for release to sanitary sewerage. For each radionuclide, Table I indicates the chemical form which is to be used for selecting the appropriate ALI or DAC

[Title 246 WAC—p. 226]

value. The ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter (AMAD) of 1 µm (micron) and for three classes (D,W,Y) of radioactive material, which refer to their retention (approximately days, weeks or years) in the pulmonary region of the lung. This classification applies to a range of clearance half-times for D if less than ten days, for W from ten to one hundred days, and for Y greater than one hundred days. Table II provides concentration limits for airborne and liquid effluents released to the general environment. Table III provides concentration limits for discharges to sanitary sewerage.

Note: The values in Tables I, II, and III are presented in the computer "E" notation. In this notation a value of 6E-02 represents a value of 6×10^{-2} or 0.06, 6E+2 represents 6×10^2 or 600, and 6E+0 represents 6×10^0 or 6.

Table I "Occupational Values"

Note that the columns in Table I of this appendix captioned "Oral Ingestion ALI," "Inhalation ALI," and "DAC," are applicable to occupational exposure to radioactive material.

The ALIs in this appendix are the annual intakes of given radionuclide by "Reference Man" which would result in either: A committed effective dose equivalent of 0.05 Sv (5 rem), stochastic ALI; or a committed dose equivalent of 0.5 Sv (50 rem) to an organ or tissue, nonstochastic ALI. The stochastic ALIs were derived to result in a risk, due to irradiation of organs and tissues, comparable to the risk associated with deep dose equivalent to the whole body of 0.05 Sv (5 rem). The derivation includes multiplying the committed dose equivalent to an organ or tissue by a weighting factor, w_T . This weighting factor is the proportion of the risk of stochastic effects resulting from irradiation of the organ or tissue, T , to the total risk of stochastic effects when the whole body is irradiated uniformly. The values of w_T are listed under the definition of weighting factor in WAC 246-221-005. The nonstochastic ALIs were derived to avoid nonstochastic effects, such as prompt damage to tissue or reduction in organ function.

A value of $w_T = 0.06$ is applicable to each of the five organs or tissues in the "remainder" category receiving the highest dose equivalents, and the dose equivalents of all other remaining tissues may be disregarded. The following portions of the GI tract — stomach, small intestine, upper large intestine, and lower large intestine — are to be treated as four separate organs.

Note that the dose equivalents for an extremity, elbows, arms below the elbows, feet and lower legs, knees, and legs below the knees, skin, and lens of the eye are not considered in computing the committed effective dose equivalent, but are subject to limits that must be met separately.

When an ALI is defined by the stochastic dose limit, this value alone is given. When an ALI is determined by the nonstochastic dose limit to an organ, the organ or tissue to which the limit applies is shown, and the ALI for the stochastic limit is shown in parentheses. Abbreviated organ or tissue designations are used:

LLI wall	=	lower large intestine wall;
St. wall	=	stomach wall;
Blad wall	=	bladder wall; and
Bone surf	=	bone surface.

The use of the ALIs listed first, the more limiting of the stochastic and nonstochastic ALIs, will ensure that nonstochastic effects are avoided and that the risk of stochastic effects is limited to an acceptably low value. If, in a particular situation involving a radionuclide for which the nonstochastic ALI is limiting, use of that nonstochastic ALI is considered unduly conservative, the licensee may use the stochastic ALI to determine the committed effective dose equivalent. However, the licensee shall also ensure that the 0.5 Sv (50 rem) dose equivalent limit for any organ or tissue is not exceeded by the sum of the external deep dose equivalent plus the internal committed dose equivalent to that organ, not the effective dose. For the case where there is no external dose contribution, this would be demonstrated if the sum of the fractions of the nonstochastic ALIs (ALI_{ns}) that contribute to the committed dose equivalent to the organ receiving the highest dose does not exceed unity, that is, \sum (intake (in μCi) of each radionuclide/ ALI_{ns}) ≤ 1.0 . If there is an external deep dose equivalent contribution of H_d , then this sum must be less than $1 - (H_d/50)$, instead of ≤ 1.0 .

The derived air concentration (DAC) values are derived limits intended to control chronic occupational exposures. The relationship between the DAC and the ALI is given by:

$$\text{DAC} = \text{ALI (in } \mu\text{Ci)} / (2000 \text{ hours per working year} \times 60 \text{ minutes/hour} \times 2 \times 10^4 \text{ ml per minute}) = [\text{ALI}/2.4 \times 10^9] \mu\text{Ci/ml},$$

where 2×10^4 ml per minute is the volume of air breathed per minute at work by Reference Man under working conditions of light work.

The DAC values relate to one of two modes of exposure: Either external submersion or the internal committed dose equivalents resulting from inhalation of radioactive materials. DACs based upon submersion are for immersion in a semi-infinite cloud of uniform concentration and apply to each radionuclide separately.

The ALI and DAC values include contributions to exposure by the single radionuclide named and any in-growth of daughter radionuclides produced in the body by decay of the parent. However, intakes that include both the parent and daughter radionuclides should be treated by the general method appropriate for mixtures.

The values of ALI and DAC do not apply directly when the individual both ingests and inhales a radionuclide, when the individual is exposed to a mixture of radionuclides by either inhalation or ingestion or both, or when the individual is exposed to both internal and external irradiation. See WAC 246-221-015. When an individual is exposed to radioactive materials which fall under several of the translocation classifications of the same radionuclide, such as, Class D, Class W, or Class Y, the exposure may be evaluated as if it were a mixture of different radionuclides.

It should be noted that the classification of a compound as Class D, W, or Y is based on the chemical form of the compound and does not take into account the radiological half-life of different radionuclides. For this reason, values are given for Class D, W, and Y compounds, even for very short-lived radionuclides.

Table II "Effluent Concentrations"

The columns in Table II of this appendix captioned "Effluents," "Air" and "Water" are applicable to the assessment and control of dose to the public, particularly in the implementation of the provisions of WAC 246-221-070. The concentration values given in Columns 1 and 2 of Table II are equivalent to the radionuclide concentrations which, if inhaled or ingested continuously over the course of a year, would produce a total effective dose equivalent of 0.50 mSv (0.05 rem).

Consideration of nonstochastic limits has not been included in deriving the air and water effluent concentration limits because nonstochastic effects are presumed not to occur at or below the dose levels established for individual members of the public. For radionuclides, where the nonstochastic limit was governing in deriving the occupational DAC, the stochastic ALI was used in deriving the corresponding airborne effluent limit in Table II. For this reason, the DAC and airborne effluent limits are not always proportional as was the case in the previous Appendix A of this chapter.

The air concentration values listed in Table II, Column 1 were derived by one of two methods. For those radionuclides for which the stochastic limit is governing, the occupational stochastic inhalation ALI was divided by 2.4×10^9 , relating the inhalation ALI to the DAC, as explained above, and then divided by a factor of three hundred. The factor of three hundred includes the following components: A factor of fifty to relate the 0.05 Sv (5 rem) annual occupational dose limit to the 1 mSv (0.1 rem) limit for members of the public, a factor of three to adjust for the difference in exposure time and the inhalation rate for a worker and that for members of the public; and a factor of two to adjust the occupational values, derived for adults, so that they are applicable to other age groups.

For those radionuclides for which submersion, that is external dose, is limiting, the occupational DAC in Table I, Column 3 was divided by two hundred nineteen. The factor of two hundred nineteen is composed of a factor of fifty, as described above, and a factor of 4.38 relating occupational exposure for two thousand hours per year to full-time exposure (eight thousand seven hundred sixty hours per year). Note that an additional factor of two for age considerations is not warranted in the submersion case.

The water concentrations were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^7 . The factor of 7.3×10^7 (ml) includes the following components: The factors of fifty and two described above and a factor of 7.3×10^5 (ml) which is the annual water intake of Reference Man.

Note 2 of this appendix provides groupings of radionuclides which are applicable to unknown mixtures of radionuclides. These groupings, including occupational inhalation ALIs and DACs, air and water effluent concentrations and releases to sewer, require demonstrating that the most limiting radionuclides in successive classes are absent. The limit for the unknown mixture is defined when the presence of one of the listed radionuclides cannot be definitely excluded as being present either from knowledge of the radionuclide composition of the source or from actual measurements.

Table III "Releases to Sewers"

The monthly average concentrations for release to sanitary sewerage are applicable to the provisions in WAC 246-221-190. The concentration values were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^6 (ml). The factor of 7.3×10^6 (ml) is composed of a factor of 7.3×10^5 (ml), the annual water intake by Reference Man, and a factor of ten, such that the concentrations, if the sewage released by the licensee were the only source of water ingested by a Reference Man during a year, would result in a committed effective dose equivalent of 5 mSv (0.5 rem).

LIST OF ELEMENTS

Name	Symbol	Atomic Number	Name	Symbol	Atomic Number
Actinium	Ac	89	Mercury	Hg	80
Aluminum	Al	13	Molybdenum	Mo	42
Americium	Am	95	Neodymium	Nd	60
Antimony	Sb	51	Neptunium	Np	93
Argon	Ar	18	Nickel	Ni	28
Arsenic	As	33	Niobium	Nb	41
Astatine	At	85	Osmium	Os	76
Barium	Ba	56	Palladium	Pd	46
Berkelium	Bk	97	Phosphorus	P	15

Name	Symbol	Atomic Number	Name	Symbol	Atomic Number
Beryllium	Be	4	Platinum	Pt	78
Bismuth	Bi	83	Plutonium	Pu	94
Bromine	Br	35	Polonium	Po	84
Cadmium	Cd	48	Potassium	K	19
Calcium	Ca	20	Praseodymium	Pr	59
Californium	Cf	98	Promethium	Pm	61
Carbon	C	6	Protactinium	Pa	91
Cerium	Ce	58	Radium	Ra	88
Cesium	Cs	55	Radon	Rn	86
Chlorine	Cl	17	Rhenium	Re	75
Chromium	Cr	24	Rhodium	Rh	45
Cobalt	Co	27	Rubidium	Rb	37
Copper	Cu	29	Ruthenium	Ru	44
Curium	Cm	96	Samarium	Sm	62
Dysprosium	Dy	66	Scandium	Sc	21
Einsteinium	Es	99	Selenium	Se	34
Erbium	Er	68	Silicon	Si	14
Europium	Eu	63	Silver	Ag	47
Fermium	Fm	100	Sodium	Na	11
Fluorine	F	9	Strontium	Sr	38
Francium	Fr	87	Sulfur	S	16
Gadolinium	Gd	64	Tantalum	Ta	73
Gallium	Ga	31	Technetium	Tc	43
Germanium	Ge	32	Tellurium	Te	52
Gold	Au	79	Terbium	Tb	65
Hafnium	Hf	72	Thallium	Tl	81
Holmium	Ho	67	Thorium	Th	90
Hydrogen	H	1	Thulium	Tm	69
Indium	In	49	Tin	Sn	50
Iodine	I	53	Titanium	Ti	22
Iridium	Ir	77	Tungsten	W	74
Iron	Fe	26	Uranium	U	92
Krypton	Kr	36	Vanadium	V	23
Lanthanum	La	57	Xenon	Xe	54
Lead	Pb	82	Ytterbium	Yb	70
Lutetium	Lu	71	Yttrium	Y	39
Magnesium	Mg	12	Zinc	Zn	30
Manganese	Mn	25	Zirconium	Zr	40
Mendelevium	Md	101			

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			Oral Ingestion	Inhalation		Air	Water	
			ALI μCi	ALI μCi	DAC μCi/ml	μCi/ml	μCi/ml	μCi/ml
1	Hydrogen-3	Water, DAC includes skin absorption	8E+4	8E+4	2E-5	1E-7	1E-3	1E-2
Gas (HT or T ₂) Submersion ¹ : Use above values as HT and T ₂ oxidize in air and in the body to HTO.								
4	Beryllium-7	W, all compounds except those given for Y Y, oxides, halides, and nitrates	4E+4	2E+4	9E-6	3E-8	6E-4	6E-3
			-	2E+4	8E-6	3E-8	-	-
4	Beryllium-10	W, see ⁷ Be	1E+3	2E+2	6E-8	2E-10	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ⁷ Be	-	1E+1	6E-9	2E-11	-	-
6	Carbon-11 ²	Monoxide	-	1E+6	5E-4	2E-6	-	-
		Dioxide	-	6E+5	3E-4	9E-7	-	-
		Compounds	4E+5	4E+5	2E-4	6E-7	6E-3	6E-2

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
6	Carbon-14	Monoxide	-	2E+6	7E-4	2E-6	-	-
		Dioxide	-	2E+5	9E-5	3E-7	-	-
		Compounds	2E+3	2E+3	1E-6	3E-9	3E-5	3E-4
9	Fluorine-18 ²	D, fluorides of H, Li, Na, K, Rb, Cs, and Fr	5E+4 St wall (5E+4)	7E+4	3E-5	1E-7	-	-
		W, fluorides of Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Mn, Tc, and Re Y, lanthanum fluoride	-	9E+4	4E-5	1E-7	-	-
			-	8E+4	3E-5	1E-7	-	-
11	Sodium-22	D, all compounds	4E+2	6E+2	3E-7	9E-10	6E-6	6E-5
11	Sodium-24	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
12	Magnesium-28	D, all compounds except those given for W	7E+2	2E+3	7E-7	2E-9	9E-6	9E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	1E+3	5E-7	2E-9	-	-
13	Aluminum-26	D, all compounds except those given for W	4E+2	6E+1	3E-8	9E-11	6E-6	6E-5
14	Silicon-31	W, oxides, hydroxides, carbides, halides, and nitrates	-	9E+1	4E-8	1E-10	-	-
		D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and nitrates Y, aluminosilicate glass	-	3E+4	1E-5	5E-8	-	-
14	Silicon-32	D, see ³¹ Si	2E+3 LLI wall (3E+3)	2E+2	1E-7	3E-10	-	-
		W, see ³¹ Si	-	1E+2	5E-8	2E-10	4E-5	4E-4
		Y, see ³¹ Si	-	5E+0	2E-9	7E-12	-	-
15	Phosphorus-32	D, all compounds except phosphates given for W	6E+2	9E+2	4E-7	1E-9	9E-6	9E-5
		W, phosphates of Zn ²⁺ , S ³⁺ , Mg ²⁺ , Fe ³⁺ , Bi ³⁺ , and lanthanides	-	4E+2	2E-7	5E-10	-	-
15	Phosphorus-33	D, see ³² P	6E+3	8E+3	4E-6	1E-8	8E-5	8E-4
		W, see ³² P	-	3E+3	1E-6	4E-9	-	-
16	Sulfur-35	Vapor	-	1E+4	6E-6	2E-8	-	-
		D, sulfides and sulfates except those given for W	1E+4 LLI wall (8E+3)	2E+4	7E-6	2E-8	-	-
		W, elemental sulfur, sulfides of Sr, Ba, Ge, Sn, Pb, As, Sb, Bi, Cu, Ag, Au, Zn, Cd, Hg, W, and Mo. Sulfates of Ca, Sr, Ba, Ra, As, Sb, and Bi	6E+3	-	-	-	1E-4	1E-3
			-	2E+3	9E-7	3E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers		
			Col. 1 Oral Ingestion ALI μCi	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml		
									Inhalation	
									ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml
17	Chlorine-36	D, chlorides of H, Li, Na, K, Rb, Cs, and Fr W, chlorides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, and Re	2E+3	2E+3	1E-6	3E-9	2E-5	2E-4		
17	Chlorine-38 ²	D, see ³⁶ Cl	2E+4 St wall (3E+4)	4E+4	2E-5	6E-8	-	-		
		W, see ³⁶ Cl	-	5E+4	2E-5	6E-8	3E-4	3E-3		
17	Chlorine-39 ²	D, see ³⁶ Cl	2E+4 St wall (4E+4)	5E+4	2E-5	7E-8	-	-		
		W, see ³⁶ Cl	-	6E+4	2E-5	8E-8	5E-4	5E-3		
18	Argon-37	Submersion ¹	-	-	1E+0	6E-3	-	-		
18	Argon-39	Submersion ¹	-	-	2E-4	8E-7	-	-		
18	Argon-41	Submersion ¹	-	-	3E-6	1E-8	-	-		
19	Potassium-40	D, all compounds	3E+2	4E+2	2E-7	6E-10	4E-6	4E-5		
19	Potassium-42	D, all compounds	5E+3	5E+3	2E-6	7E-9	6E-5	6E-4		
19	Potassium-43	D, all compounds	6E+3	9E+3	4E-6	1E-8	9E-5	9E-4		
19	Potassium-44 ²	D, all compounds	2E+4 St wall (4E+4)	7E+4	3E-5	9E-8	-	-		
			-	-	-	-	5E-4	5E-3		
19	Potassium-45 ²	D, all compounds	3E+4 St wall (5E+4)	1E+5	5E-5	2E-7	-	-		
			-	-	-	-	7E-4	7E-3		
20	Calcium-41	W, all compounds	3E+3 Bone surf (4E+3)	4E+3 Bone surf (4E+3)	2E-6	-	-	-		
			-	-	-	5E-9	6E-5	6E-4		
20	Calcium-45	W, all compounds	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4		
20	Calcium-47	W, all compounds	8E+2	9E+2	4E-7	1E-9	1E-5	1E-4		
21	Scandium-43	Y, all compounds	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3		
21	Scandium-44m	Y, all compounds	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5		
21	Scandium-44	Y, all compounds	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4		
21	Scandium-46	Y, all compounds	9E+2	2E+2	1E-7	3E-10	1E-5	1E-4		
21	Scandium-47	Y, all compounds	2E+3 LLI wall (3E+3)	3E+3	1E-6	4E-9	-	-		
			-	-	-	-	4E-5	4E-4		
21	Scandium-48	Y, all compounds	8E+2	1E+3	6E-7	2E-9	1E-5	1E-4		

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
21	Scandium-49 ²	Y, all compounds	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
22	Titanium-44	D, all compounds except those given for W and Y	3E+2	1E+1	5E-9	2E-11	4E-6	4E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	3E+1	1E-8	4E-11	-	-
		Y, SrTiO	-	6E+0	2E-9	8E-12	-	-
22	Titanium-45	D, see ⁴⁴ Ti	9E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see ⁴⁴ Ti	-	4E+4	1E-5	5E-8	-	-
		Y, see ⁴⁴ Ti	-	3E+4	1E-5	4E-8	-	-
23	Vanadium-47 ²	D, all compounds except those given for W	3E+4	8E+4	3E-5	1E-7	-	-
		St wall (3E+4)	-	-	-	-	4E-4	4E-3
		W, oxides, hydroxides, carbides, and halides	-	1E+5	4E-5	1E-7	-	-
23	Vanadium-48	D, see ⁴⁷ V	6E+2	1E+3	5E-7	2E-9	9E-6	9E-5
		W, see ⁴⁷ V	-	6E+2	3E-7	9E-10	-	-
23	Vanadium-49	D, see ⁴⁷ V	7E+4	3E+4	1E-5	-	-	-
		LLI wall (9E+4)	-	Bone surf (3E+4)	-	5E-8	1E-3	1E-2
		W, see ⁴⁷ V	-	2E+4	8E-6	2E-8	-	-
24	Chromium-48	D, all compounds except those given for W and Y	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, halides and nitrates	-	7E+3	3E-6	1E-8	-	-
		Y, oxides and hydroxides	-	7E+3	3E-6	1E-8	-	-
24	Chromium-49 ²	D, see ⁴⁸ Cr	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, see ⁴⁸ Cr	-	1E+5	4E-5	1E-7	-	-
		Y, see ⁴⁸ Cr	-	9E+4	4E-5	1E-7	-	-
24	Chromium-51	D, see ⁴⁸ Cr	4E+4	5E+4	2E-5	6E-8	5E-4	5E-3
		W, see ⁴⁸ Cr	-	2E+4	1E-5	3E-8	-	-
		Y, see ⁴⁸ Cr	-	2E+4	8E-6	3E-8	-	-
25	Manganese-51 ²	D, all compounds except those given for W	2E+4	5E+4	2E-5	7E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	8E-8	-	-
25	Manganese-52m ²	D, see ⁵¹ Mn	3E+4	9E+4	4E-5	1E-7	-	-
		St wall (4E+4)	-	-	-	-	5E-4	5E-3
		W, see ⁵¹ Mn	-	1E+5	4E-5	1E-7	-	-
25	Manganese-52	D, see ⁵¹ Mn	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
		W, see ⁵¹ Mn	-	9E+2	4E-7	1E-9	-	-
25	Manganese-53	D, see ⁵¹ Mn	5E+4	1E+4	5E-6	-	7E-4	7E-3
		Bone surf (2E+4)	-	-	-	3E-8	-	-
		W, see ⁵¹ Mn	-	1E+4	5E-6	2E-8	-	-
25	Manganese-54	D, see ⁵¹ Mn	2E+3	9E+2	4E-7	1E-9	3E-5	3E-4
		W, see ⁵¹ Mn	-	8E+2	3E-7	1E-9	-	-
25	Manganese-56	D, see ⁵¹ Mn	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁵¹ Mn	-	2E+4	9E-6	3E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
26	Iron-52	D, all compounds except those given for W	9E+2	3E+3	1E-6	4E-9	1E-5	1E-4
		W, oxides, hydroxides, and halides	-	2E+3	1E-6	3E-9	-	-
26	Iron-55	D, see ^{52}Fe	9E+3	2E+3	8E-7	3E-9	1E-4	1E-3
		W, see ^{52}Fe	-	4E+3	2E-6	6E-9	-	-
26	Iron-59	D, see ^{52}Fe	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		W, see ^{52}Fe	-	5E+2	2E-7	7E-10	-	-
26	Iron-60	D, see ^{52}Fe	3E+1	6E+0	3E-9	9E-12	4E-7	4E-6
		W, see ^{52}Fe	-	2E+1	8E-9	3E-11	-	-
27	Cobalt-55	W, all compounds except those given for Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
27	Cobalt-56	W, see ^{55}Co	5E+2	3E+2	1E-7	4E-10	6E-6	6E-5
27	Cobalt-57	Y, see ^{55}Co	4E+2	2E+2	8E-8	3E-10	-	-
		W, see ^{55}Co	8E+3	3E+3	1E-6	4E-9	6E-5	6E-4
27	Cobalt-58m	Y, see ^{55}Co	4E+3	7E+2	3E-7	9E-10	-	-
		W, see ^{55}Co	6E+4	9E+4	4E-5	1E-7	8E-4	8E-3
27	Cobalt-58	Y, see ^{55}Co	-	6E+4	3E-5	9E-8	-	-
		W, see ^{55}Co	2E+3	1E+3	5E-7	2E-9	2E-5	2E-4
27	Cobalt-60m ²	Y, see ^{55}Co	1E+3	7E+2	3E-7	1E-9	-	-
		W, see ^{55}Co	1E+6	4E+6	2E-3	6E-6	-	-
27	Cobalt-60	St wall (1E+6)	-	-	-	-	2E-2	2E-1
		Y, see ^{55}Co	-	3E+6	1E-3	4E-6	-	-
27	Cobalt-61 ²	W, see ^{55}Co	5E+2	2E+2	7E-8	2E-10	3E-6	3E-5
		Y, see ^{55}Co	2E+2	3E+1	1E-8	5E-11	-	-
27	Cobalt-62m ²	W, see ^{55}Co	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		Y, see ^{55}Co	2E+4	6E+4	2E-5	8E-8	-	-
27	Cobalt-62m ²	W, see ^{55}Co	4E+4	2E+5	7E-5	2E-7	-	-
		Y, see ^{55}Co	St wall (5E+4)	-	-	-	7E-4	7E-3
28	Nickel-56	Y, see ^{55}Co	-	2E+5	6E-5	2E-7	-	-
		D, all compounds except those given for W	1E+3	2E+3	8E-7	3E-9	2E-5	2E-4
28	Nickel-57	W, oxides, hydroxides, and carbides	-	1E+3	5E-7	2E-9	-	-
		Vapor	-	1E+3	5E-7	2E-9	-	-
28	Nickel-59	D, see ^{56}Ni	2E+3	5E+3	2E-6	7E-9	2E-5	2E-4
		W, see ^{56}Ni	-	3E+3	1E-6	4E-9	-	-
28	Nickel-63	Vapor	-	6E+3	3E-6	9E-9	-	-
		D, see ^{56}Ni	2E+4	4E+3	2E-6	5E-9	3E-4	3E-3
28	Nickel-63	W, see ^{56}Ni	-	7E+3	3E-6	1E-8	-	-
		Vapor	-	2E+3	8E-7	3E-9	-	-
28	Nickel-63	D, see ^{56}Ni	9E+3	2E+3	7E-7	2E-9	1E-4	1E-3
		W, see ^{56}Ni	-	3E+3	1E-6	4E-9	-	-
		Vapor	-	8E+2	3E-7	1E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
28	Nickel-65	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	8E+3 - -	2E+4 3E+4 2E+4	1E-5 1E-5 7E-6	3E-8 4E-8 2E-8	1E-4 - -	1E-3 - -
28	Nickel-66	D, see ⁵⁶ Ni W, see ⁵⁶ Ni Vapor	4E+2 LLI wall (5E+2) - -	2E+3 - 6E+2 3E+3	7E-7 - 3E-7 1E-6	2E-9 - 9E-10 4E-9	- 6E-6 -	- 6E-5 -
29	Copper-60 ²	D, all compounds except those given for W and Y W, sulfides, halides, and nitrates Y, oxides and hydroxides	3E+4 St wall (3E+4) - -	9E+4 - 1E+5 1E+5	4E-5 - 5E-5 4E-5	1E-7 - 2E-7 1E-7	- 4E-4 - -	- 4E-3 - -
29	Copper-61	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 4E+4 4E+4	1E-5 2E-5 1E-5	4E-8 6E-8 5E-8	2E-4 - -	2E-3 - -
29	Copper-64	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	1E+4 - -	3E+4 2E+4 2E+4	1E-5 1E-5 9E-6	4E-8 3E-8 3E-8	2E-4 - -	2E-3 - -
29	Copper-67	D, see ⁶⁰ Cu W, see ⁶⁰ Cu Y, see ⁶⁰ Cu	5E+3 - -	8E+3 5E+3 5E+3	3E-6 2E-6 2E-6	1E-8 7E-9 6E-9	6E-5 - -	6E-4 - -
30	Zinc-62	Y, all compounds	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
30	Zinc-63 ²	Y, all compounds	2E+4 St wall (3E+4)	7E+4 - -	3E-5 - -	9E-8 - -	- 3E-4	- 3E-3
30	Zinc-65	Y, all compounds	4E+2	3E+2	1E-7	4E-10	5E-6	5E-5
30	Zinc-69m	Y, all compounds	4E+3	7E+3	3E-6	1E-8	6E-5	6E-4
30	Zinc-69 ²	Y, all compounds	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
30	Zinc-71m	Y, all compounds	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
30	Zinc-72	Y, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
31	Gallium-65 ²	D, all compounds except those given for W W, oxides, hydroxides, carbides, halides, and nitrates	5E+4 St wall (6E+4) -	2E+5 - 2E+5	7E-5 - 8E-5	2E-7 - 3E-7	- 9E-4 -	- 9E-3 -
31	Gallium-66	D, see ⁶⁵ Ga W, see ⁶⁵ Ga	1E+3 -	4E+3 3E+3	1E-6 1E-6	5E-9 4E-9	1E-5 -	1E-4 -
31	Gallium-67	D, see ⁶⁵ Ga W, see ⁶⁵ Ga	7E+3 -	1E+4 1E+4	6E-6 4E-6	2E-8 1E-8	1E-4 -	1E-3 -
31	Gallium-68 ²	D, see ⁶⁵ Ga W, see ⁶⁵ Ga	2E+4 -	4E+4 5E+4	2E-5 2E-5	6E-8 7E-8	2E-4 -	2E-3 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
				Inhalation				
31	Gallium-70 ²	D, see ⁶⁵ Ga	5E+4	2E+5	7E-5	2E-7	-	-
		W, see ⁶⁵ Ga	St wall (7E+4)	-	-	-	1E-3	1E-2
			-	2E+5	8E-5	3E-7	-	-
31	Gallium-72	D, see ⁶⁵ Ga	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ⁶⁵ Ga	-	3E+3	1E-6	4E-9	-	-
31	Gallium-73	D, see ⁶⁵ Ga	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁶⁵ Ga	-	2E+4	6E-6	2E-8	-	-
32	Germanium-66	D, all compounds except those given for W	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
		W, oxides, sulfides, and halides	-	2E+4	8E-6	3E-8	-	-
32	Germanium-67 ²	D, see ⁶⁶ Ge	3E+4	9E+4	4E-5	1E-7	-	-
		W, see ⁶⁶ Ge	St wall (4E+4)	-	-	-	6E-4	6E-3
			-	1E+5	4E-5	1E-7	-	-
32	Germanium-68	D, see ⁶⁶ Ge	5E+3	4E+3	2E-6	5E-9	6E-5	6E-4
		W, see ⁶⁶ Ge	-	1E+2	4E-8	1E-10	-	-
32	Germanium-69	D, see ⁶⁶ Ge	1E+4	2E+4	6E-6	2E-8	2E-4	2E-3
		W, see ⁶⁶ Ge	-	8E+3	3E-6	1E-8	-	-
32	Germanium-71	D, see ⁶⁶ Ge	5E+5	4E+5	2E-4	6E-7	7E-3	7E-2
		W, see ⁶⁶ Ge	-	4E+4	2E-5	6E-8	-	-
32	Germanium-75 ²	D, see ⁶⁶ Ge	4E+4	8E+4	3E-5	1E-7	-	-
		W, see ⁶⁶ Ge	St wall (7E+4)	-	-	-	9E-4	9E-3
			-	8E+4	4E-5	1E-7	-	-
32	Germanium-77	D, see ⁶⁶ Ge	9E+3	1E+4	4E-6	1E-8	1E-4	1E-3
		W, see ⁶⁶ Ge	-	6E+3	2E-6	8E-9	-	-
32	Germanium-78 ²	D, see ⁶⁶ Ge	2E+4	2E+4	9E-6	3E-8	-	-
		W, see ⁶⁶ Ge	St wall (2E+4)	-	-	-	3E-4	3E-3
			-	2E+4	9E-6	3E-8	-	-
33	Arsenic-69 ²	W, all compounds	3E+4	1E+5	5E-5	2E-7	-	-
			St wall (4E+4)	-	-	-	6E-4	6E-3
33	Arsenic-70 ²	W, all compounds	1E+4	5E+4	2E-5	7E-8	2E-4	2E-3
33	Arsenic-71	W, all compounds	4E+3	5E+3	2E-6	6E-9	5E-5	5E-4
33	Arsenic-72	W, all compounds	9E+2	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-73	W, all compounds	8E+3	2E+3	7E-7	2E-9	1E-4	1E-3
33	Arsenic-74	W, all compounds	1E+3	8E+2	3E-7	1E-9	2E-5	2E-4
33	Arsenic-76	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-77	W, all compounds	4E+3	5E+3	2E-6	7E-9	-	-
			LLI wall (5E+3)	-	-	-	6E-5	6E-4
33	Arsenic-78 ²	W, all compounds	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	DAC μCi/ml				
34	Selenium-70 ²	D, all compounds except those given for W	2E+4	4E+4	2E-5	5E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and elemental Se	1E+4	4E+4	2E-5	6E-8	-	-
34	Selenium-73m ²	D, see ⁷⁰ Se	6E+4	2E+5	6E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	6E-5	2E-7	-	-
34	Selenium-73	D, see ⁷⁰ Se	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
		W, see ⁷⁰ Se	-	2E+4	7E-6	2E-8	-	-
34	Selenium-75	D, see ⁷⁰ Se	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
		W, see ⁷⁰ Se	-	6E+2	3E-7	8E-10	-	-
34	Selenium-79	D, see ⁷⁰ Se	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
		W, see ⁷⁰ Se	-	6E+2	2E-7	8E-10	-	-
34	Selenium-81m ²	D, see ⁷⁰ Se	4E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, see ⁷⁰ Se	2E+4	7E+4	3E-5	1E-7	-	-
34	Selenium-81 ²	D, see ⁷⁰ Se	6E+4	2E+5	9E-5	3E-7	-	-
		St wall (8E+4)	-	-	-	-	1E-3	1E-2
		W, see ⁷⁰ Se	-	2E+5	1E-4	3E-7	-	-
34	Selenium-83 ²	D, see ⁷⁰ Se	4E+4	1E+5	5E-5	2E-7	4E-4	4E-3
		W, see ⁷⁰ Se	3E+4	1E+5	5E-5	2E-7	-	-
35	Bromine-74m ²	D, bromides of H, Li, Na, K, Rb, Cs, and Fr	1E+4 St wall (2E+4)	4E+4	2E-5	5E-8	-	-
		W, bromides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Mn, Tc, and Re	-	4E+4	2E-5	6E-8	-	-
			-	-	-	-	3E-4	3E-3
35	Bromine-74 ²	D, see ^{74m} Br	2E+4 St wall (4E+4)	7E+4	3E-5	1E-7	-	-
		W, see ^{74m} Br	-	8E+4	4E-5	1E-7	5E-45E-3	-
35	Bromine-75 ²	D, see ^{74m} Br	3E+4 St wall (4E+4)	5E+4	2E-5	7E-8	-	-
		W, see ^{74m} Br	-	5E+4	2E-5	7E-8	5E-4	5E-3
35	Bromine-76	D, see ^{74m} Br	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
		W, see ^{74m} Br	-	4E+3	2E-6	6E-9	-	-
35	Bromine-77	D, see ^{74m} Br	2E+4	2E+4	1E-5	3E-8	2E-4	2E-3
		W, see ^{74m} Br	-	2E+4	8E-6	3E-8	-	-
35	Bromine-80m	D, see ^{74m} Br	2E+4	2E+4	7E-6	2E-8	3E-4	3E-3
		W, see ^{74m} Br	-	1E+4	6E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
ALI μCi	ALI μCi	DAC $\mu\text{Ci/ml}$	Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$			
35	Bromine-80 ²	D, see ^{74m} Br	5E+4 St wall (9E+4)	2E+5	8E-5	3E-7	-	-
		W, see ^{74m} Br	-	2E+5	9E-5	3E-7	1E-3	1E-2
35	Bromine-82	D, see ^{74m} Br	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see ^{74m} Br	-	4E+3	2E-6	5E-9	-	-
35	Bromine-83	D, see ^{74m} Br	5E+4 St wall (7E+4)	6E+4	3E-5	9E-8	-	-
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	9E-4	9E-3
35	Bromine-84 ²	D, see ^{74m} Br	2E+4 St wall (3E+4)	6E+4	2E-5	8E-8	-	-
		W, see ^{74m} Br	-	6E+4	3E-5	9E-8	4E-4	4E-3
36	Krypton-74 ²	Submersion ¹	-	-	3E-6	1E-8	-	-
36	Krypton-76	Submersion ¹	-	-	9E-6	4E-8	-	-
36	Krypton-77 ²	Submersion ¹	-	-	4E-6	2E-8	-	-
36	Krypton-79	Submersion ¹	-	-	2E-5	7E-8	-	-
36	Krypton-81	Submersion ¹	-	-	7E-4	3E-6	-	-
36	Krypton-83m ²	Submersion ¹	-	-	1E-2	5E-5	-	-
36	Krypton-85m	Submersion ¹	-	-	2E-5	1E-7	-	-
36	Krypton-85	Submersion ¹	-	-	1E-4	7E-7	-	-
36	Krypton-87 ²	Submersion ¹	-	-	5E-6	2E-8	-	-
36	Krypton-88	Submersion ¹	-	-	2E-6	9E-9	-	-
37	Rubidium-79 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5	5E-5	2E-7	-	-
			-	-	-	-	8E-4	8E-3
37	Rubidium-81m ²	D, all compounds	2E+5 St wall (3E+5)	3E+5	1E-4	5E-7	-	-
			-	-	-	-	4E-3	4E-2
37	Rubidium-81	D, all compounds	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
37	Rubidium-82m	D, all compounds	1E+4	2E+4	7E-6	2E-8	2E-4	2E-3
37	Rubidium-83	D, all compounds	6E+2	1E+3	4E-7	1E-9	9E-6	9E-5
37	Rubidium-84	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-86	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-87	D, all compounds	1E+3	2E+3	6E-7	2E-9	1E-5	1E-4
37	Rubidium-88 ²	D, all compounds	2E+4 St wall (3E+4)	6E+4	3E-5	9E-8	-	-
			-	-	-	-	4E-4	4E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
37	Rubidium-89 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	6E-5 -	2E-7 -	- 9E-4	- 9E-3
38	Strontium-80 ²	D, all soluble compounds except SrTiO	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		Y, all insoluble com- pounds and SrTiO	-	1E+4	5E-6	2E-8	-	-
38	Strontium-81 ²	D, see ⁸⁰ Sr	3E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see ⁸⁰ Sr	2E+4	8E+4	3E-5	1E-7	-	-
38	Strontium-82	D, see ⁸⁰ Sr	3E+2 LLI wall (2E+2)	4E+2 -	2E-7 -	6E-10 -	- 3E-6	- 3E-5
		Y, see ⁸⁰ Sr	2E+2	9E+1	4E-8	1E-10	-	-
38	Strontium-83	D, see ⁸⁰ Sr	3E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, see ⁸⁰ Sr	2E+3	4E+3	1E-6	5E-9	-	-
38	Strontium-85m ²	D, see ⁸⁰ Sr	2E+5	6E+5	3E-4	9E-7	3E-3	3E-2
		Y, see ⁸⁰ Sr	-	8E+5	4E-4	1E-6	-	-
38	Strontium-85	D, see ⁸⁰ Sr	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
		Y, see ⁸⁰ Sr	-	2E+3	6E-7	2E-9	-	-
38	Strontium-87m	D, see ⁸⁰ Sr	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see ⁸⁰ Sr	4E+4	2E+5	6E-5	2E-7	-	-
38	Strontium-89	D, see ⁸⁰ Sr	6E+2 LLI wall (6E+2)	8E+2 -	4E-7 -	1E-9 -	- 8E-6	- 8E-5
		Y, see ⁸⁰ Sr	5E+2	1E+2	6E-8	2E-10	-	-
38	Strontium-90	D, see ⁸⁰ Sr	3E+1 Bone surf (4E+1)	2E+1 Bone surf (2E+1)	8E-9 -	- 3E-11	- 5E-7	- 5E-6
		Y, see ⁸⁰ Sr	-	4E+0	2E-9	6E-12	-	-
38	Strontium-91	D, see ⁸⁰ Sr	2E+3	6E+3	2E-6	8E-9	2E-5	2E-4
		Y, see ⁸⁰ Sr	-	4E+3	1E-6	5E-9	-	-
38	Strontium-92	D, see ⁸⁰ Sr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ⁸⁰ Sr	-	7E+3	3E-6	9E-9	-	-
39	Yttrium-86m ²	W, all compounds except those given for Y	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		Y, oxides and hydroxides	-	5E+4	2E-5	8E-8	-	-
39	Yttrium-86	W, see ^{86m} Y	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ^{86m} Y	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-87	W, see ^{86m} Y	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		Y, see ^{86m} Y	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-88	W, see ^{86m} Y	1E+3	3E+2	1E-7	3E-10	1E-5	1E-4
		Y, see ^{86m} Y	-	2E+2	1E-7	3E-10	-	-
39	Yttrium-90m	W, see ^{86m} Y	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
		Y, see ^{86m} Y	-	1E+4	5E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
39	Yttrium-90	W, see ^{86m} Y	4E+2	7E+2	3E-7	9E-10	-	-
		Y, see ^{86m} Y	LLI wall (5E+2)	-	-	-	7E-6	7E-5
39	Yttrium-91m ²	W, see ^{86m} Y	1E+5	2E+5	1E-4	3E-7	2E-3	2E-2
		Y, see ^{86m} Y	-	2E+5	7E-5	2E-7	-	-
39	Yttrium-91	W, see ^{86m} Y	5E+2	2E+2	7E-8	2E-10	-	-
		Y, see ^{86m} Y	LLI wall (6E+2)	-	-	-	8E-6	8E-5
39	Yttrium-92	W, see ^{86m} Y	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ^{86m} Y	-	8E+3	3E-6	1E-8	-	-
39	Yttrium-93	W, see ^{86m} Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see ^{86m} Y	-	2E+3	1E-6	3E-9	-	-
39	Yttrium-94 ²	W, see ^{86m} Y	2E+4	8E+4	3E-5	1E-7	-	-
		Y, see ^{86m} Y	St wall (3E+4)	-	-	-	4E-4	4E-3
39	Yttrium-95 ²	W, see ^{86m} Y	4E+4	2E+5	6E-5	2E-7	-	-
		Y, see ^{86m} Y	St wall (5E+4)	-	-	-	7E-4	7E-3
40	Zirconium-86	D, all compounds except those given for W and Y	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
		Y, carbide	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-88	D, see ⁸⁶ Zr	4E+3	2E+2	9E-8	3E-10	5E-5	5E-4
		W, see ⁸⁶ Zr	-	5E+2	2E-7	7E-10	-	-
		Y, see ⁸⁶ Zr	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-89	D, see ⁸⁶ Zr	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ⁸⁶ Zr	-	2E+3	1E-6	3E-9	-	-
		Y, see ⁸⁶ Zr	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-93	D, see ⁸⁶ Zr	1E+3	6E+0	3E-9	-	-	-
		W, see ⁸⁶ Zr	Bone surf (3E+3)	Bone surf (2E+1)	-	2E-11	4E-5	4E-4
		Y, see ⁸⁶ Zr	-	2E+1	1E-8	-	-	-
		Y, see ⁸⁶ Zr	-	Bone surf (6E+1)	-	9E-11	-	-
40	Zirconium-95	D, see ⁸⁶ Zr	1E+3	1E+2	5E-8	-	2E-5	2E-4
		W, see ⁸⁶ Zr	-	Bone surf (3E+2)	-	4E-10	-	-
		Y, see ⁸⁶ Zr	-	4E+2	2E-7	5E-10	-	-
		Y, see ⁸⁶ Zr	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-97	D, see ⁸⁶ Zr	6E+2	2E+3	8E-7	3E-9	9E-6	9E-5
		W, see ⁸⁶ Zr	-	1E+3	6E-7	2E-9	-	-
		Y, see ⁸⁶ Zr	-	1E+3	5E-7	2E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	ALI μCi	DAC μCi/ml				
41	Niobium-88 ²	W, all compounds except those given for Y	5E+4 St wall (7E+4)	2E+5	9E-5	3E-7	-	-
		Y, oxides and hydroxides	-	2E+5	9E-5	3E-7	1E-3	1E-2
41	Niobium-89 ² (66 min)	W, see ⁸⁸ Nb	1E+4	4E+4	2E-5	6E-8	1E-4	1E-3
		Y, see ⁸⁸ Nb	-	4E+4	2E-5	5E-8	-	-
41	Niobium-89 (122 min)	W, see ⁸⁸ Nb	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ⁸⁸ Nb	-	2E+4	6E-6	2E-8	-	-
41	Niobium-90	W, see ⁸⁸ Nb	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		Y, see ⁸⁸ Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-93m	W, see ⁸⁸ Nb	9E+3 LLI wall (1E+4)	2E+3	8E-7	3E-9	-	-
		Y, see ⁸⁸ Nb	-	2E+2	7E-8	2E-10	2E-4	2E-3
41	Niobium-94	W, see ⁸⁸ Nb	9E+2	2E+2	8E-8	3E-10	1E-5	1E-4
		Y, see ⁸⁸ Nb	-	2E+1	6E-9	2E-11	-	-
41	Niobium-95m	W, see ⁸⁸ Nb	2E+3 LLI wall (2E+3)	3E+3	1E-6	4E-9	-	-
		Y, see ⁸⁸ Nb	-	2E+3	9E-7	3E-9	3E-5	3E-4
41	Niobium-95	W, see ⁸⁸ Nb	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		Y, see ⁸⁸ Nb	-	1E+3	5E-7	2E-9	-	-
41	Niobium-96	W, see ⁸⁸ Nb	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see ⁸⁸ Nb	-	2E+3	1E-6	3E-9	-	-
41	Niobium-97 ²	W, see ⁸⁸ Nb	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see ⁸⁸ Nb	-	7E+4	3E-5	1E-7	-	-
41	Niobium-98 ²	W, see ⁸⁸ Nb	1E+4	5E+4	2E-5	8E-8	2E-4	2E-3
		Y, see ⁸⁸ Nb	-	5E+4	2E-5	7E-8	-	-
42	Molybdenum-90	D, all compounds except those given for Y	4E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, oxides, hydroxides, and MoS	2E+3	5E+3	2E-6	6E-9	-	-
42	Molybdenum-93m	D, see ⁹⁰ Mo	9E+3	2E+4	7E-6	2E-8	6E-5	6E-4
		Y, see ⁹⁰ Mo	4E+3	1E+4	6E-6	2E-8	-	-
42	Molybdenum-93	D, see ⁹⁰ Mo	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		Y, see ⁹⁰ Mo	2E+4	2E+2	8E-8	2E-10	-	-
42	Molybdenum-99	D, see ⁹⁰ Mo	2E+3 LLI wall (1E+3)	3E+3	1E-6	4E-9	-	-
		Y, see ⁹⁰ Mo	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
42	Molybdenum-101 ²	D, see ⁹⁰ Mo	4E+4 St wall (5E+4)	1E+5	6E-5	2E-7	-	-
		Y, see ⁹⁰ Mo	-	1E+5	6E-5	2E-7	7E-4	7E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
43	Technetium-93m ²	D, all compounds except those given for W W, oxides, hydroxides, halides, and nitrates	7E+4 -	2E+5 3E+5	6E-5 1E-4	2E-7 4E-7	1E-3 -	1E-2 -
43	Technetium-93	D, see ^{93m} Tc W, see ^{93m} Tc	3E+4 -	7E+4 1E+5	3E-5 4E-5	1E-7 1E-7	4E-4 -	4E-3 -
43	Technetium-94m ²	D, see ^{93m} Tc W, see ^{93m} Tc	2E+4 -	4E+4 6E+4	2E-5 2E-5	6E-8 8E-8	3E-4 -	3E-3 -
43	Technetium-94	D, see ^{93m} Tc W, see ^{93m} Tc	9E+3 -	2E+4 2E+4	8E-6 1E-5	3E-8 3E-8	1E-4 -	1E-3 -
43	Technetium-95m	D, see ^{93m} Tc W, see ^{93m} Tc	4E+3 -	5E+3 2E+3	2E-6 8E-7	8E-9 3E-9	5E-5 -	5E-4 -
43	Technetium-95	D, see ^{93m} Tc W, see ^{93m} Tc	1E+4 -	2E+4 2E+4	9E-6 8E-6	3E-8 3E-8	1E-4 -	1E-3 -
43	Technetium-96m ²	D, see ^{93m} Tc W, see ^{93m} Tc	2E+5 -	3E+5 2E+5	1E-4 1E-4	4E-7 3E-7	2E-3 -	2E-2 -
43	Technetium-96	D, see ^{93m} Tc W, see ^{93m} Tc	2E+3 -	3E+3 2E+3	1E-6 9E-7	5E-9 3E-9	3E-5 -	3E-4 -
43	Technetium-97m	D, see ^{93m} Tc W, see ^{93m} Tc	5E+3 - -	7E+3 St wall (7E+3) 1E+3	3E-6 - 5E-7	- 1E-8 2E-9	6E-5 - -	6E-4 - -
43	Technetium-97	D, see ^{93m} Tc W, see ^{93m} Tc	4E+4 -	5E+4 6E+3	2E-5 2E-6	7E-8 8E-9	5E-4 -	5E-3 -
43	Technetium-98	D, see ^{93m} Tc W, see ^{93m} Tc	1E+3 -	2E+3 3E+2	7E-7 1E-7	2E-9 4E-10	1E-5 -	1E-4 -
43	Technetium-99m	D, see ^{93m} Tc W, see ^{93m} Tc	8E+4 -	2E+5 2E+5	6E-5 1E-4	2E-7 3E-7	1E-3 -	1E-2 -
43	Technetium-99	D, see ^{93m} Tc W, see ^{93m} Tc	4E+3 - -	5E+3 St wall (6E+3) 7E+2	2E-6 - 3E-7	- 8E-9 9E-10	6E-5 - -	6E-4 - -
43	Technetium-101 ²	D, see ^{93m} Tc W, see ^{93m} Tc	9E+4 St wall (1E+5) -	3E+5 - 4E+5	1E-4 - 2E-4	5E-7 - 5E-7	- 2E-3 -	- 2E-2 -
43	Technetium-104 ²	D, see ^{93m} Tc W, see ^{93m} Tc	2E+4 St wall (3E+4) -	7E+4 - 9E+4	3E-5 - 4E-5	1E-7 - 1E-7	- 4E-4 -	- 4E-3 -
44	Ruthenium-94 ²	D, all compounds except those given for W and Y W, halides Y, oxides and hydroxides	2E+4 - -	4E+4 6E+4 6E+4	2E-5 3E-5 2E-5	6E-8 9E-8 8E-8	2E-4 - -	2E-3 - -
44	Ruthenium-97	D, see ⁹⁴ Ru W, see ⁹⁴ Ru Y, see ⁹⁴ Ru	8E+3 - -	2E+4 1E+4 1E+4	8E-6 5E-6 5E-6	3E-8 2E-8 2E-8	1E-4 - -	1E-3 - -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
				ALI μCi	DAC μCi/ml			
44	Ruthenium-103	D, see ⁹⁴ Ru	2E+3	2E+3	7E-7	2E-9	3E-5	3E-4
		W, see ⁹⁴ Ru	-	1E+3	4E-7	1E-9	-	-
		Y, see ⁹⁴ Ru	-	6E+2	3E-7	9E-10	-	-
44	Ruthenium-105	D, see ⁹⁴ Ru	5E+3	1E+4	6E-6	2E-8	7E-5	7E-4
		W, see ⁹⁴ Ru	-	1E+4	6E-6	2E-8	-	-
		Y, see ⁹⁴ Ru	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-106	D, see ⁹⁴ Ru	2E+2	9E+1	4E-8	1E-10	-	-
		LLI wall (2E+2)	-	-	-	-	3E-6	3E-5
		W, see ⁹⁴ Ru	-	5E+1	2E-8	8E-11	-	-
		Y, see ⁹⁴ Ru	-	1E+1	5E-9	2E-11	-	-
45	Rhodium-99m	D, all compounds except those given for W and Y	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		W, halides	-	8E+4	3E-5	1E-7	-	-
		Y, oxides and hydroxides	-	7E+4	3E-5	9E-8	-	-
45	Rhodium-99	D, see ^{99m} Rh	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ^{99m} Rh	-	2E+3	9E-7	3E-9	-	-
		Y, see ^{99m} Rh	-	2E+3	8E-7	3E-9	-	-
45	Rhodium-100	D, see ^{99m} Rh	2E+3	5E+3	2E-6	7E-9	2E-5	2E-4
		W, see ^{99m} Rh	-	4E+3	2E-6	6E-9	-	-
		Y, see ^{99m} Rh	-	4E+3	2E-6	5E-9	-	-
45	Rhodium-101m	D, see ^{99m} Rh	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{99m} Rh	-	8E+3	4E-6	1E-8	-	-
		Y, see ^{99m} Rh	-	8E+3	3E-6	1E-8	-	-
45	Rhodium-101	D, see ^{99m} Rh	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ^{99m} Rh	-	8E+2	3E-7	1E-9	-	-
		Y, see ^{99m} Rh	-	2E+2	6E-8	2E-10	-	-
45	Rhodium-102m	D, see ^{99m} Rh	1E+3	5E+2	2E-7	7E-10	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		W, see ^{99m} Rh	-	4E+2	2E-7	5E-10	-	-
		Y, see ^{99m} Rh	-	1E+2	5E-8	2E-10	-	-
45	Rhodium-102	D, see ^{99m} Rh	6E+2	9E+1	4E-8	1E-10	8E-6	8E-5
		W, see ^{99m} Rh	-	2E+2	7E-8	2E-10	-	-
		Y, see ^{99m} Rh	-	6E+1	2E-8	8E-11	-	-
45	Rhodium-103m ²	D, see ^{99m} Rh	4E+5	1E+6	5E-4	2E-6	6E-3	6E-2
		W, see ^{99m} Rh	-	1E+6	5E-4	2E-6	-	-
		Y, see ^{99m} Rh	-	1E+6	5E-4	2E-6	-	-
45	Rhodium-105	D, see ^{99m} Rh	4E+3	1E+4	5E-6	2E-8	-	-
		LLI wall (4E+3)	-	-	-	-	5E-5	5E-4
		W, see ^{99m} Rh	-	6E+3	3E-6	9E-9	-	-
		Y, see ^{99m} Rh	-	6E+3	2E-6	8E-9	-	-
45	Rhodium-106m	D, see ^{99m} Rh	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, see ^{99m} Rh	-	4E+4	2E-5	5E-8	-	-
		Y, see ^{99m} Rh	-	4E+4	1E-5	5E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
45	Rhodium-107 ²	D, see ^{99m} Rh	7E+4	2E+5	1E-4	3E-7	-	-
			St wall (9E+4)	-	-	-	1E-3	1E-2
		W, see ^{99m} Rh	-	3E+5	1E-4	4E-7	-	-
		Y, see ^{99m} Rh	-	3E+5	1E-4	3E-7	-	-
46	Palladium-100	D, all compounds except those given for W and Y	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
		W, nitrates	-	1E+3	5E-7	2E-9	-	-
		Y, oxides and hydroxides	-	1E+3	6E-7	2E-9	-	-
46	Palladium-101	D, see ¹⁰⁰ Pd	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ¹⁰⁰ Pd	-	3E+4	1E-5	5E-8	-	-
		Y, see ¹⁰⁰ Pd	-	3E+4	1E-5	4E-8	-	-
46	Palladium-103	D, see ¹⁰⁰ Pd	6E+3	6E+3	3E-6	9E-9	-	-
			LLI wall (7E+3)	-	-	-	1E-4	1E-3
		W, see ¹⁰⁰ Pd	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁰⁰ Pd	-	4E+3	1E-6	5E-9	-	-
46	Palladium-107	D, see ¹⁰⁰ Pd	3E+4	2E+4	9E-6	-	-	-
			LLI wall (4E+4)	Kidneys (2E+4)	-	3E-8	5E-4	5E-3
		W, see ¹⁰⁰ Pd	-	7E+3	3E-6	1E-8	-	-
		Y, see ¹⁰⁰ Pd	-	4E+2	2E-7	6E-10	-	-
46	Palladium-109	D, see ¹⁰⁰ Pd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		W, see ¹⁰⁰ Pd	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁰⁰ Pd	-	5E+3	2E-6	6E-9	-	-
47	Silver-102 ²	D, all compounds except those given for W and Y	5E+4	2E+5	8E-5	2E-7	-	-
			St wall (6E+4)	-	-	-	9E-4	9E-3
		W, nitrates and sulfides	-	2E+5	9E-5	3E-7	-	-
		Y, oxides and hydroxides	-	2E+5	8E-5	3E-7	-	-
47	Silver-103 ²	D, see ¹⁰² Ag	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104m ²	D, see ¹⁰² Ag	3E+4	9E+4	4E-5	1E-7	4E-4	4E-3
		W, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	5E-5	2E-7	-	-
47	Silver-104 ²	D, see ¹⁰² Ag	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
		W, see ¹⁰² Ag	-	1E+5	6E-5	2E-7	-	-
		Y, see ¹⁰² Ag	-	1E+5	6E-5	2E-7	-	-
47	Silver-105	D, see ¹⁰² Ag	3E+3	1E+3	4E-7	1E-9	4E-5	4E-4
		W, see ¹⁰² Ag	-	2E+3	7E-7	2E-9	-	-
		Y, see ¹⁰² Ag	-	2E+3	7E-7	2E-9	-	-
47	Silver-106m	D, see ¹⁰² Ag	8E+2	7E+2	3E-7	1E-9	1E-5	1E-4
		W, see ¹⁰² Ag	-	9E+2	4E-7	1E-9	-	-
		Y, see ¹⁰² Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-106 ²	D, see ¹⁰² Ag	6E+4	2E+5	8E-5	3E-7	-	-
			St. wall (6E+4)	-	-	-	9E-4	9E-3
		W, see ¹⁰² Ag	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁰² Ag	-	2E+5	8E-5	3E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
		ALI μCi	DAC $\mu\text{Ci/ml}$			$\mu\text{Ci/ml}$		
47	Silver-108m	D, see ^{102}Ag	6E+2	2E+2	8E-8	3E-10	9E-6	9E-5
		W, see ^{102}Ag	-	3E+2	1E-7	4E-10	-	-
		Y, see ^{102}Ag	-	2E+1	1E-8	3E-11	-	-
47	Silver-110m	D, see ^{102}Ag	5E+2	1E+2	5E-8	2E-10	6E-6	6E-5
		W, see ^{102}Ag	-	2E+2	8E-8	3E-10	-	-
		Y, see ^{102}Ag	-	9E+1	4E-8	1E-10	-	-
47	Silver-111	D, see ^{102}Ag	9E+2	2E+3	6E-7	-	-	-
		LLI wall (1E+3)	-	Liver (2E+3)	-	2E-9	2E-5	2E-4
		W, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
47	Silver-112	Y, see ^{102}Ag	-	9E+2	4E-7	1E-9	-	-
		D, see ^{102}Ag	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ^{102}Ag	-	1E+4	4E-6	1E-8	-	-
47	Silver-115 ²	Y, see ^{102}Ag	-	9E+3	4E-6	1E-8	-	-
		D, see ^{102}Ag	3E+4	9E+4	4E-5	1E-7	-	-
		St wall (3E+4)	-	-	-	-	4E-4	4E-3
48	Cadmium-104 ²	W, see ^{102}Ag	-	9E+4	4E-5	1E-7	-	-
		Y, see ^{102}Ag	-	8E+4	3E-5	1E-7	-	-
		D, all compounds except those given for W and Y W, sulfides, halides, and nitrates Y, oxides and hydroxides	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
48	Cadmium-107	W, see ^{104}Cd	-	1E+5	5E-5	2E-7	-	-
		Y, see ^{104}Cd	-	1E+5	5E-5	2E-7	-	-
		D, see ^{104}Cd	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
48	Cadmium-109	W, see ^{104}Cd	-	6E+4	2E-5	8E-8	-	-
		Y, see ^{104}Cd	-	5E+4	2E-5	7E-8	-	-
		D, see ^{104}Cd	3E+2	4E+1	1E-8	-	-	-
48	Cadmium-113m	Kidneys (4E+2)	-	Kidneys (5E+1)	-	7E-11	6E-6	6E-5
		W, see ^{104}Cd	-	1E+2	5E-8	-	-	-
		Y, see ^{104}Cd	-	Kidneys (1E+2)	-	2E-10	-	-
48	Cadmium-113	D, see ^{104}Cd	2E+1	2E+0	1E-9	-	-	-
		Kidneys (4E+1)	-	Kidneys (4E+0)	-	5E-12	5E-7	5E-6
		W, see ^{104}Cd	-	8E+0	4E-9	-	-	-
48	Cadmium-115	Y, see ^{104}Cd	-	Kidneys (1E+1)	-	2E-11	-	-
		D, see ^{104}Cd	2E+1	2E+0	9E-10	-	-	-
		Kidneys (3E+1)	-	Kidneys (3E+0)	-	5E-12	4E-7	4E-6
48	Cadmium-115m	W, see ^{104}Cd	-	8E+0	3E-9	-	-	-
		Y, see ^{104}Cd	-	Kidneys (1E+1)	-	2E-11	-	-
		D, see ^{104}Cd	3E+2	1E+1	6E-9	2E-11	-	-
48	Cadmium-115m	W, see ^{104}Cd	-	1E+1	6E-9	2E-11	-	-
		Y, see ^{104}Cd	-	Kidneys (8E+1)	-	1E-10	-	-
		D, see ^{104}Cd	3E+2	5E+1	2E-8	-	4E-6	4E-5
48	Cadmium-115m	W, see ^{104}Cd	-	1E+2	5E-8	2E-10	-	-
		Y, see ^{104}Cd	-	1E+2	6E-8	2E-10	-	-
		D, see ^{104}Cd	3E+2	5E+1	2E-8	-	4E-6	4E-5

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			9E+2	ALI μCi	DAC μCi/ml			
48	Cadmium-115	D, see ¹⁰⁴ Cd	9E+2	1E+3	6E-7	2E-9	-	-
			LLI wall (1E+3)	-	-	-	1E-5	1E-4
		W, see ¹⁰⁴ Cd	-	1E+3	5E-7	2E-9	-	-
		Y, see ¹⁰⁴ Cd	-	1E+3	6E-7	2E-9	-	-
48	Cadmium-117m	D, see ¹⁰⁴ Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ¹⁰⁴ Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ¹⁰⁴ Cd	-	1E+4	6E-6	2E-8	-	-
48	Cadmium-117	D, see ¹⁰⁴ Cd	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see ¹⁰⁴ Cd	-	2E+4	7E-6	2E-8	-	-
		Y, see ¹⁰⁴ Cd	-	1E+4	6E-6	2E-8	-	-
49	Indium-109	D, all compounds except those given for W	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	9E-8	-	-
49	Indium-110 ² (69.1 min)	D, see ¹⁰⁹ In	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁰⁹ In	-	6E+4	2E-5	8E-8	-	-
49	Indium-110 (4.9 h)	D, see ¹⁰⁹ In	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		W, see ¹⁰⁹ In	-	2E+4	8E-6	3E-8	-	-
49	Indium-111	D, see ¹⁰⁹ In	4E+3	6E+3	3E-6	9E-9	6E-5	6E-4
		W, see ¹⁰⁹ In	-	6E+3	3E-6	9E-9	-	-
49	Indium-112 ²	D, see ¹⁰⁹ In	2E+5	6E+5	3E-4	9E-7	2E-3	2E-2
		W, see ¹⁰⁹ In	-	7E+5	3E-4	1E-6	-	-
49	Indium-113m ²	D, see ¹⁰⁹ In	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		W, see ¹⁰⁹ In	-	2E+5	8E-5	3E-7	-	-
49	Indium-114m	D, see ¹⁰⁹ In	3E+2	6E+1	3E-8	9E-11	-	-
			LLI wall (4E+2)	-	-	-	5E-6	5E-5
		W, see ¹⁰⁹ In	-	1E+2	4E-8	1E-10	-	-
49	Indium-115m	D, see ¹⁰⁹ In	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁰⁹ In	-	5E+4	2E-5	7E-8	-	-
49	Indium-115	D, see ¹⁰⁹ In	4E+1	1E+0	6E-10	2E-12	5E-7	5E-6
		W, see ¹⁰⁹ In	-	5E+0	2E-9	8E-12	-	-
49	Indium-116m ²	D, see ¹⁰⁹ In	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		W, see ¹⁰⁹ In	-	1E+5	5E-5	2E-7	-	-
49	Indium-117m ²	D, see ¹⁰⁹ In	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see ¹⁰⁹ In	-	4E+4	2E-5	6E-8	-	-
49	Indium-117 ²	D, see ¹⁰⁹ In	6E+4	2E+5	7E-5	2E-7	8E-4	8E-3
		W, see ¹⁰⁹ In	-	2E+5	9E-5	3E-7	-	-
49	Indium-119m ²	D, see ¹⁰⁹ In	4E+4	1E+5	5E-5	2E-7	-	-
			St wall (5E+4)	-	-	-	7E-4	7E-3
		W, see ¹⁰⁹ In	-	1E+5	6E-5	2E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration $\mu\text{Ci/ml}$
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
	ALI μCi	ALI μCi	DAC $\mu\text{Ci/ml}$					
50	Tin-110	D, all compounds except those given for W W, sulfides, oxides, hydroxides, halides, nitrates, and stannic phosphate	4E+3 -	1E+4 1E+4	5E-6 5E-6	2E-8 2E-8	5E-5 -	5E-4 -
50	Tin-111 ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	7E+4 -	2E+5 3E+5	9E-5 1E-4	3E-7 4E-7	1E-3 -	1E-2 -
50	Tin-113	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3) -	1E+3 5E+2	5E-7 2E-7	2E-9 8E-10	- 3E-5 -	- 3E-4 -
50	Tin-117m	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	2E+3 LLI wall (2E+3) -	1E+3 Bone surf (2E+3) 1E+3	5E-7 - 6E-7	- 3E-9 2E-9	- 3E-5 -	- 3E-4 -
50	Tin-119m	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3) -	2E+3 1E+3	1E-6 -	3E-9 1E-9	- 6E-5 -	- 6E-4 -
50	Tin-121m	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	3E+3 LLI wall (4E+3) -	9E+2 5E+2	4E-7 2E-7	1E-9 8E-10	- 5E-5 -	- 5E-4 -
50	Tin-121	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	6E+3 LLI wall (6E+3) -	2E+4 1E+4	6E-6 5E-6	2E-8 2E-8	- 8E-5 -	- 8E-4 -
50	Tin-123m ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	5E+4 -	1E+5 1E+5	5E-5 6E-5	2E-7 2E-7	7E-4 -	7E-3 -
50	Tin-123	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	5E+2 LLI wall (6E+2) -	6E+2 2E+2	3E-7 7E-8	9E-10 2E-10	- 9E-6 -	- 9E-5 -
50	Tin-125	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	4E+2 LLI wall (5E+2) -	9E+2 4E+2	4E-7 1E-7	1E-9 5E-10	- 6E-6 -	- 6E-5 -
50	Tin-126	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	3E+2 -	6E+1 7E+1	2E-8 3E-8	8E-11 9E-11	4E-6 -	4E-5 -
50	Tin-127	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	7E+3 -	2E+4 2E+4	8E-6 8E-6	3E-8 3E-8	9E-5 -	9E-4 -
50	Tin-128 ²	D, see ¹¹⁰ Sn W, see ¹¹⁰ Sn	9E+3 -	3E+4 4E+4	1E-5 1E-5	4E-8 5E-8	1E-4 -	1E-3 -
51	Antimony-115 ²	D, all compounds except those given for W W, oxides, hydroxides, halides, sulfides, sulfates, and nitrates	8E+4 -	2E+5 3E+5	1E-4 1E-4	3E-7 4E-7	1E-3 -	1E-2 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
		ALI μCi	DAC $\mu\text{Ci/ml}$					
51	Antimony-116m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 -	7E+4 1E+5	3E-5 6E-5	1E-7 2E-7	3E-4 -	3E-3 -
51	Antimony-116 ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	7E+4 St wall (9E+4) -	3E+5 - 3E+5	1E-4 - 1E-4	4E-7 - 5E-7	- 1E-3 -	- 1E-2 -
51	Antimony-117	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	7E+4 -	2E+5 3E+5	9E-5 1E-4	3E-7 4E-7	9E-4 -	9E-3 -
51	Antimony-118m	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+3 5E+3	2E+4 2E+4	8E-6 9E-6	3E-8 3E-8	7E-5 -	7E-4 -
51	Antimony-119	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 2E+4	5E+4 3E+4	2E-5 1E-5	6E-8 4E-8	2E-4 -	2E-3 -
51	Antimony-120 ² (16 min)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+5 St wall (2E+5) -	4E+5 - 5E+5	2E-4 - 2E-4	6E-7 - 7E-7	- 2E-3 -	- 2E-2 -
51	Antimony-120 (5.76 d)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+3 9E+2	2E+3 1E+3	9E-7 5E-7	3E-9 2E-9	1E-5 -	1E-4 -
51	Antimony-122	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	8E+2 LLI wall (8E+2) 7E+2	2E+3 - 1E+3	1E-6 - 4E-7	3E-9 - 2E-9	- 1E-5 -	- 1E-4 -
51	Antimony-124m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	3E+5 2E+5	8E+5 6E+5	4E-4 2E-4	1E-6 8E-7	3E-3 -	3E-2 -
51	Antimony-124	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	9E+2 2E+2	4E-7 1E-7	1E-9 3E-10	7E-6 -	7E-5 -
51	Antimony-125	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+3 -	2E+3 5E+2	1E-6 2E-7	3E-9 7E-10	3E-5 -	3E-4 -
51	Antimony-126m ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	5E+4 St wall (7E+4) -	2E+5 - 2E+5	8E-5 - 8E-5	3E-7 - 3E-7	- 9E-4 -	- 9E-3 -
51	Antimony-126	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	6E+2 5E+2	1E+3 5E+2	5E-7 2E-7	2E-9 7E-10	7E-6 -	7E-5 -
51	Antimony-127	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	8E+2 LLI wall (8E+2) 7E+2	2E+3 - 9E+2	9E-7 - 4E-7	3E-9 - 1E-9	- 1E-5 -	- 1E-4 -
51	Antimony-128 ² (10.4 min)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	8E+4 St wall (1E+5) -	4E+5 - 4E+5	2E-4 - 2E-4	5E-7 - 6E-7	- 1E-3 -	- 1E-2 -
51	Antimony-128 (9.01 h)	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+3 -	4E+3 3E+3	2E-6 1E-6	6E-9 5E-9	2E-5 -	2E-4 -
51	Antimony-129	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	3E+3 -	9E+3 9E+3	4E-6 4E-6	1E-8 1E-8	4E-5 -	4E-4 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI μCi	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration $\mu\text{Ci/ml}$
						Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
51	Antimony-130 ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	2E+4 -	6E+4 8E+4	3E-5 3E-5	9E-8 1E-7	3E-4 -	3E-3 -
51	Antimony-131 ²	D, see ¹¹⁵ Sb W, see ¹¹⁵ Sb	1E+4 Thyroid (2E+4) - -	2E+4 Thyroid (4E+4) 2E+4 Thyroid (4E+4)	1E-5 - 1E-5 -	- 6E-8 2E-4 6E-8	- 2E-4 - -	- 2E-3 - -
52	Tellurium-116	D, all compounds except those given for W W, oxides, hydroxides, and nitrates	8E+3 -	2E+4 3E+4	9E-6 1E-5	3E-8 4E-8	1E-4 -	1E-3 -
52	Tellurium-121m	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	5E+2 Bone surf (7E+2) -	2E+2 Bone surf (4E+2) 4E+2	8E-8 - 2E-7	- 5E-10 6E-10	- 1E-5 -	- 1E-4 -
52	Tellurium-121	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	3E+3 -	4E+3 3E+3	2E-6 1E-6	6E-9 4E-9	4E-5 -	4E-4 -
52	Tellurium-123m	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	6E+2 Bone surf (1E+3) -	2E+2 Bone surf (5E+2) 5E+2	9E-8 - 2E-7	- 8E-10 8E-10	- 1E-5 -	- 1E-4 -
52	Tellurium-123	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	5E+2 Bone surf (1E+3) -	2E+2 Bone surf (5E+2) 4E+2 Bone surf (1E+3)	8E-8 - 2E-7 -	- 7E-10 - 2E-9	- 2E-5 - -	- 2E-4 - -
52	Tellurium-125m	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	1E+3 Bone surf (1E+3) -	4E+2 Bone surf (1E+3) 7E+2	2E-7 - 3E-7	- 1E-9 1E-9	- 2E-5 -	- 2E-4 -
52	Tellurium-127m	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	6E+2 -	3E+2 Bone surf (4E+2) 3E+2	1E-7 - 1E-7	- 6E-10 4E-10	9E-6 - -	9E-5 - -
52	Tellurium-127	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	7E+3 -	2E+4 2E+4	9E-6 7E-6	3E-8 2E-8	1E-4 -	1E-3 -
52	Tellurium-129m	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	5E+2 -	6E+2 2E+2	3E-7 1E-7	9E-10 3E-10	7E-6 -	7E-5 -
52	Tellurium-129 ²	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	3E+4 -	6E+4 7E+4	3E-5 3E-5	9E-8 1E-7	4E-4 -	4E-3 -
52	Tellurium-131m	D, see ¹¹⁶ Te W, see ¹¹⁶ Te	3E+2 Thyroid (6E+2) -	4E+2 Thyroid (1E+3) 4E+2 Thyroid (9E+2)	2E-7 - 2E-7 -	- 2E-9 - 1E-9	- 8E-6 - -	- 8E-5 - -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion ALI μCi	Col. 2 ALI μCi	Col. 3 DAC μCi/ml	Col. 1 Air μCi/ml	Col. 2 Water μCi/ml	Monthly Average Concentration μCi/ml
52	Tellurium-131 ²	D, see ¹¹⁶ Te	3E+3 Thyroid (6E+3)	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	- 8E-5	- 8E-4
		W, see ¹¹⁶ Te	-	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	-	-
52	Tellurium-132	D, see ¹¹⁶ Te	2E+2 Thyroid (7E+2)	2E+2 Thyroid (8E+2)	9E-8 -	- 1E-9	- 9E-6	- 9E-5
		W, see ¹¹⁶ Te	-	2E+2 Thyroid (6E+2)	9E-8 -	- 9E-10	-	-
52	Tellurium-133m ²	D, see ¹¹⁶ Te	3E+3 Thyroid (6E+3)	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	- 9E-5	- 9E-4
		W, see ¹¹⁶ Te	-	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	-	-
52	Tellurium-133 ²	D, see ¹¹⁶ Te	1E+4 Thyroid (3E+4)	2E+4 Thyroid (6E+4)	9E-6 -	- 8E-8	- 4E-4	- 4E-3
		W, see ¹¹⁶ Te	-	2E+4 Thyroid (6E+4)	9E-6 -	- 8E-8	-	-
52	Tellurium-134 ²	D, see ¹¹⁶ Te	2E+4 Thyroid (2E+4)	2E+4 Thyroid (5E+4)	1E-5 -	- 7E-8	- 3E-4	- 3E-3
		W, see ¹¹⁶ Te	-	2E+4 Thyroid (5E+4)	1E-5 -	- 7E-8	-	-
53	Iodine-120m ²	D, all compounds	1E+4 Thyroid (1E+4)	2E+4 -	9E-6 -	3E-8 -	- 2E-4	- 2E-3
53	Iodine-120 ²	D, all compounds	4E+3 Thyroid (8E+3)	9E+3 Thyroid (1E+4)	4E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-121	D, all compounds	1E+4 Thyroid (3E+4)	2E+4 Thyroid (5E+4)	8E-6 -	- 7E-8	- 4E-4	- 4E-3
53	Iodine-123	D, all compounds	3E+3 Thyroid (1E+4)	6E+3 Thyroid (2E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-124	D, all compounds	5E+1 Thyroid (2E+2)	8E+1 Thyroid (3E+2)	3E-8 -	- 4E-10	- 2E-6	- 2E-5
53	Iodine-125	D, all compounds	4E+1 Thyroid (1E+2)	6E+1 Thyroid (2E+2)	3E-8 -	- 3E-10	- 2E-6	- 2E-5
53	Iodine-126	D, all compounds	2E+1 Thyroid (7E+1)	4E+1 Thyroid (1E+2)	1E-8 -	- 2E-10	- 1E-6	- 1E-5

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
53	Iodine-128 ²	D, all compounds	4E+4 St wall (6E+4)	1E+5	5E-5	2E-7	- 8E-4	- 8E-3
53	Iodine-129	D, all compounds	5E+0 Thyroid (2E+1)	9E+0 Thyroid (3E+1)	4E-9	- 4E-11	- 2E-7	- 2E-6
53	Iodine-130	D, all compounds	4E+2 Thyroid (1E+3)	7E+2 Thyroid (2E+3)	3E-7	- 3E-9	- 2E-5	- 2E-4
53	Iodine-131	D, all compounds	3E+1 Thyroid (9E+1)	5E+1 Thyroid (2E+2)	2E-8	- 2E-10	- 1E-6	- 1E-5
53	Iodine-132m ²	D, all compounds	4E+3 Thyroid (1E+4)	8E+3 Thyroid (2E+4)	4E-6	- 3E-8	- 1E-4	- 1E-3
53	Iodine-132	D, all compounds	4E+3 Thyroid (9E+3)	8E+3 Thyroid (1E+4)	3E-6	- 2E-8	- 1E-4	- 1E-3
53	Iodine-133	D, all compounds	1E+2 Thyroid (5E+2)	3E+2 Thyroid (9E+2)	1E-7	- 1E-9	- 7E-6	- 7E-5
53	Iodine-134 ²	D, all compounds	2E+4 Thyroid (3E+4)	5E+4	2E-5	6E-8	- 4E-4	- 4E-3
53	Iodine-135	D, all compounds	8E+2 Thyroid (3E+3)	2E+3 Thyroid (4E+3)	7E-7	- 6E-9	- 3E-5	- 3E-4
54	Xenon-120 ²	Submersion ¹	-	-	1E-5	4E-8	-	-
54	Xenon-121 ²	Submersion ¹	-	-	2E-6	1E-8	-	-
54	Xenon-122	Submersion ¹	-	-	7E-5	3E-7	-	-
54	Xenon-123	Submersion ¹	-	-	6E-6	3E-8	-	-
54	Xenon-125	Submersion ¹	-	-	2E-5	7E-8	-	-
54	Xenon-127	Submersion ¹	-	-	1E-5	6E-8	-	-
54	Xenon-129m	Submersion ¹	-	-	2E-4	9E-7	-	-
54	Xenon-131m	Submersion ¹	-	-	4E-4	2E-6	-	-
54	Xenon-133m	Submersion ¹	-	-	1E-4	6E-7	-	-
54	Xenon-133	Submersion ¹	-	-	1E-4	5E-7	-	-
54	Xenon-135m ²	Submersion ¹	-	-	9E-6	4E-8	-	-
54	Xenon-135	Submersion ¹	-	-	1E-5	7E-8	-	-
54	Xenon-138 ²	Submersion ¹	-	-	4E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
55	Cesium-125 ²	D, all compounds	5E+4 St wall (9E+4)	1E+5	6E-5	2E-7	- 1E-3	- 1E-2
55	Cesium-127	D, all compounds	6E+4	9E+4	4E-5	1E-7	9E-4	9E-3
55	Cesium-129	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
55	Cesium-130 ²	D, all compounds	6E+4 St wall (1E+5)	2E+5	8E-5	3E-7	- 1E-3	- 1E-2
55	Cesium-131	D, all compounds	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
55	Cesium-132	D, all compounds	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
55	Cesium-134m	D, all compounds	1E+5 St wall (1E+5)	1E+5	6E-5	2E-7	- 2E-3	- 2E-2
55	Cesium-134	D, all compounds	7E+1	1E+2	4E-8	2E-10	9E-7	9E-6
55	Cesium-135m ²	D, all compounds	1E+5	2E+5	8E-5	3E-7	1E-3	1E-2
55	Cesium-135	D, all compounds	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
55	Cesium-136	D, all compounds	4E+2	7E+2	3E-7	9E-10	6E-6	6E-5
55	Cesium-137	D, all compounds	1E+2	2E+2	6E-8	2E-10	1E-6	1E-5
55	Cesium-138 ²	D, all compounds	2E+4 St wall (3E+4)	6E+4	2E-5	8E-8	- 4E-4	- 4E-3
56	Barium-126 ²	D, all compounds	6E+3	2E+4	6E-6	2E-8	8E-5	8E-4
56	Barium-128	D, all compounds	5E+2	2E+3	7E-7	2E-9	7E-6	7E-5
56	Barium-131m ²	D, all compounds	4E+5 St wall (5E+5)	1E+6	6E-4	2E-6	- 7E-3	- 7E-2
56	Barium-131	D, all compounds	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
56	Barium-133m	D, all compounds	2E+3 LLI wall (3E+3)	9E+3	4E-6	1E-8	- 4E-5	- 4E-4
56	Barium-133	D, all compounds	2E+3	7E+2	3E-7	9E-10	2E-5	2E-4
56	Barium-135m	D, all compounds	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
56	Barium-139 ²	D, all compounds	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
56	Barium-140	D, all compounds	5E+2 LLI wall (6E+2)	1E+3	6E-7	2E-9	- 8E-6	- 8E-5
56	Barium-141 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
56	Barium-142 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
57	Lanthanum-131 ²	D, all compounds except those given for W W, oxides and hydroxides	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
			-	2E+5	7E-5	2E-7	-	-
57	Lanthanum-132	D, see ¹³¹ La W, see ¹³¹ La	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
			-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-135	D, see ¹³¹ La W, see ¹³¹ La	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
			-	9E+4	4E-5	1E-7	-	-
57	Lanthanum-137	D, see ¹³¹ La	1E+4	6E+1	3E-8	-	2E-4	2E-3
			-	Liver (7E+1)	-	1E-10	-	-
		W, see ¹³¹ La	-	3E+2	1E-7	-	-	-
			-	Liver (3E+2)	-	4E-10	-	-
57	Lanthanum-138	D, see ¹³¹ La W, see ¹³¹ La	9E+2	4E+0	1E-9	5E-12	1E-5	1E-4
			-	1E+1	6E-9	2E-11	-	-
57	Lanthanum-140	D, see ¹³¹ La W, see ¹³¹ La	6E+2	1E+3	6E-7	2E-9	9E-6	9E-5
			-	1E+3	5E-7	2E-9	-	-
57	Lanthanum-141	D, see ¹³¹ La W, see ¹³¹ La	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
			-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-142 ²	D, see ¹³¹ La W, see ¹³¹ La	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
			-	3E+4	1E-5	5E-8	-	-
57	Lanthanum-143 ²	D, see ¹³¹ La	4E+4	1E+5	4E-5	1E-7	-	-
			St wall (4E+4)	-	-	-	5E-4	5E-3
		W, see ¹³¹ La	-	9E+4	4E-5	1E-7	-	-
58	Cerium-134	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	5E+2	7E+2	3E-7	1E-9	-	-
			LLI wall (6E+2)	-	-	-	8E-6	8E-5
			-	7E+2	3E-7	9E-10	-	-
58	Cerium-135	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	2E+3	4E+3	2E-6	5E-9	2E-5	2E-4
			-	4E+3	1E-6	5E-9	-	-
58	Cerium-137m	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	2E+3	4E+3	2E-6	6E-9	-	-
			LLI wall (2E+3)	-	-	-	3E-5	3E-4
			-	4E+3	2E-6	5E-9	-	-
58	Cerium-137	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
			-	1E+5	5E-5	2E-7	-	-
58	Cerium-139	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	5E+3	8E+2	3E-7	1E-9	7E-5	7E-4
			-	7E+2	3E-7	9E-10	-	-
58	Cerium-141	W, see ¹³⁴ Ce Y, see ¹³⁴ Ce	2E+3	7E+2	3E-7	1E-9	-	-
			LLI wall (2E+3)	-	-	-	3E-5	3E-4
			-	6E+2	2E-7	8E-10	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	ALI μCi	DAC μCi/ml	Air μCi/ml	Water μCi/ml	μCi/ml
58	Cerium-143	W, see ¹³⁴ Ce	1E+3	2E+3	8E-7	3E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹³⁴ Ce	-	2E+3	7E-7	2E-9	-	-
58	Cerium-144	W, see ¹³⁴ Ce	2E+2	3E+1	1E-8	4E-11	-	-
		LLI wall (3E+2)	-	-	-	-	3E-6	3E-5
		Y, see ¹³⁴ Ce	-	1E+1	6E-9	2E-11	-	-
59	Praseodymium-136 ²	W, all compounds except those given for Y	5E+4	2E+5	1E-4	3E-7	-	-
		St wall (7E+4)	-	-	-	-	1E-3	1E-2
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	9E-5	3E-7	-	-
59	Praseodymium-137 ²	W, see ¹³⁶ Pr	4E+4	2E+5	6E-5	2E-7	5E-4	5E-3
		Y, see ¹³⁶ Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-138m	W, see ¹³⁶ Pr	1E+4	5E+4	2E-5	8E-8	1E-4	1E-3
		Y, see ¹³⁶ Pr	-	4E+4	2E-5	6E-8	-	-
59	Praseodymium-139	W, see ¹³⁶ Pr	4E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see ¹³⁶ Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-142m ²	W, see ¹³⁶ Pr	8E+4	2E+5	7E-5	2E-7	1E-3	1E-2
		Y, see ¹³⁶ Pr	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-142	W, see ¹³⁶ Pr	1E+3	2E+3	9E-7	3E-9	1E-5	1E-4
		Y, see ¹³⁶ Pr	-	2E+3	8E-7	3E-9	-	-
59	Praseodymium-143	W, see ¹³⁶ Pr	9E+2	8E+2	3E-7	1E-9	-	-
		LLI wall (1E+3)	-	-	-	-	2E-5	2E-4
		Y, see ¹³⁶ Pr	-	7E+2	3E-7	9E-10	-	-
59	Praseodymium-144 ²	W, see ¹³⁶ Pr	3E+4	1E+5	5E-5	2E-7	-	-
		St wall (4E+4)	-	-	-	-	6E-4	6E-3
		Y, see ¹³⁶ Pr	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-145	W, see ¹³⁶ Pr	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see ¹³⁶ Pr	-	8E+3	3E-6	1E-8	-	-
59	Praseodymium-147 ²	W, see ¹³⁶ Pr	5E+4	2E+5	8E-5	3E-7	-	-
		St wall (8E+4)	-	-	-	-	1E-3	1E-2
		Y, see ¹³⁶ Pr	-	2E+5	8E-5	3E-7	-	-
60	Neodymium-136 ²	W, all compounds except those given for Y	1E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	5E+4	2E-5	8E-8	-	-
60	Neodymium-138	W, see ¹³⁶ Nd	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		Y, see ¹³⁶ Nd	-	5E+3	2E-6	7E-9	-	-
60	Neodymium-139m	W, see ¹³⁶ Nd	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		Y, see ¹³⁶ Nd	-	1E+4	6E-6	2E-8	-	-
60	Neodymium-139 ²	W, see ¹³⁶ Nd	9E+4	3E+5	1E-4	5E-7	1E-3	1E-2
		Y, see ¹³⁶ Nd	-	3E+5	1E-4	4E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
60	Neodymium-141	W, see ^{136}Nd	2E+5	7E+5	3E-4	1E-6	2E-3	2E-2
		Y, see ^{136}Nd	-	6E+5	3E-4	9E-7	-	-
60	Neodymium-147	W, see ^{136}Nd	1E+3	9E+2	4E-7	1E-9	-	-
		Y, see ^{136}Nd	LLI wall (1E+3)	-	-	-	2E-5	2E-4
60	Neodymium-149 ²	W, see ^{136}Nd	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
		Y, see ^{136}Nd	-	2E+4	1E-5	3E-8	-	-
60	Neodymium-151 ²	W, see ^{136}Nd	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		Y, see ^{136}Nd	-	2E+5	8E-5	3E-7	-	-
61	Promethium-141 ²	W, all compounds except those given for Y	5E+4 St wall (6E+4)	2E+5	8E-5	3E-7	-	-
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	7E-5	2E-7	8E-4	8E-3
61	Promethium-143	W, see ^{141}Pm	5E+3	6E+2	2E-7	8E-10	7E-5	7E-4
		Y, see ^{141}Pm	-	7E+2	3E-7	1E-9	-	-
61	Promethium-144	W, see ^{141}Pm	1E+3	1E+2	5E-8	2E-10	2E-5	2E-4
		Y, see ^{141}Pm	-	1E+2	5E-8	2E-10	-	-
61	Promethium-145	W, see ^{141}Pm	1E+4	2E+2	7E-8	-	1E-4	1E-3
		Y, see ^{141}Pm	-	Bone surf (2E+2)	-	3E-10	-	-
61	Promethium-146	W, see ^{141}Pm	2E+3	5E+1	2E-8	7E-11	2E-5	2E-4
		Y, see ^{141}Pm	-	4E+1	2E-8	6E-11	-	-
61	Promethium-147	W, see ^{141}Pm	4E+3	1E+2	5E-8	-	-	-
		Y, see ^{141}Pm	LLI wall (5E+3)	Bone surf (2E+2)	-	3E-10	7E-5	7E-4
61	Promethium-148m	W, see ^{141}Pm	7E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		Y, see ^{141}Pm	-	3E+2	1E-7	5E-10	-	-
61	Promethium-148	W, see ^{141}Pm	4E+2	5E+2	2E-7	8E-10	-	-
		Y, see ^{141}Pm	LLI wall (5E+2)	-	-	-	7E-6	7E-5
61	Promethium-149	W, see ^{141}Pm	1E+3	2E+3	8E-7	3E-9	-	-
		Y, see ^{141}Pm	LLI wall (1E+3)	-	-	-	2E-5	2E-4
61	Promethium-150	W, see ^{141}Pm	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see ^{141}Pm	-	2E+4	7E-6	2E-8	-	-
61	Promethium-151	W, see ^{141}Pm	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		Y, see ^{141}Pm	-	3E+3	1E-6	4E-9	-	-
62	Samarium-141m ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
62	Samarium-141 ²	W, all compounds	5E+4 St wall (6E+4)	2E+5	8E-5	2E-7	-	8E-3
62	Samarium-142 ²	W, all compounds	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
62	Samarium-145	W, all compounds	6E+3	5E+2	2E-7	7E-10	8E-5	8E-4
62	Samarium-146	W, all compounds	1E+1 Bone surf (3E+1)	4E-2 Bone surf (6E-2)	1E-11	-	-	-
						9E-14	3E-7	3E-6
62	Samarium-147	W, all compounds	2E+1 Bone surf (3E+1)	4E-2 Bone surf (7E-2)	2E-11	-	-	-
						1E-13	4E-7	4E-6
62	Samarium-151	W, all compounds	1E+4 LLI wall (1E+4)	1E+2 Bone surf (2E+2)	4E-8	-	-	-
						2E-10	2E-4	2E-3
62	Samarium-153	W, all compounds	2E+3 LLI wall (2E+3)	3E+3	1E-6	4E-9	-	-
						-	3E-5	3E-4
62	Samarium-155 ²	W, all compounds	6E+4 St wall (8E+4)	2E+5	9E-5	3E-7	-	-
						-	1E-3	1E-2
62	Samarium-156	W, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
63	Europium-145	W, all compounds	2E+3	2E+3	8E-7	3E-9	2E-5	2E-4
63	Europium-146	W, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
63	Europium-147	W, all compounds	3E+3	2E+3	7E-7	2E-9	4E-5	4E-4
63	Europium-148	W, all compounds	1E+3	4E+2	1E-7	5E-10	1E-5	1E-4
63	Europium-149	W, all compounds	1E+4	3E+3	1E-6	4E-9	2E-4	2E-3
63	Europium-150 (12.62h)	W, all compounds	3E+3	8E+3	4E-6	1E-8	4E-5	4E-4
63	Europium-150 (34.2 y)	W, all compounds	8E+2	2E+1	8E-9	3E-11	1E-5	1E-4
63	Europium-152m	W, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
63	Europium-152	W, all compounds	8E+2	2E+1	1E-8	3E-11	1E-5	1E-4
63	Europium-154	W, all compounds	5E+2	2E+1	8E-9	3E-11	7E-6	7E-5
63	Europium-155	W, all compounds	4E+3	9E+1 Bone surf (1E+2)	4E-8	-	5E-5	5E-4
			-			2E-10	-	-
63	Europium-156	W, all compounds	6E+2	5E+2	2E-7	6E-10	8E-6	8E-5
63	Europium-157	W, all compounds	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
63	Europium-158 ²	W, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
64	Gadolinium-145 ²	D, all compounds except those given for W	5E+4 St wall (5E+4)	2E+5	6E-5	2E-7	-	-
		W, oxides, hydroxides, and fluo- rides	-	2E+5	7E-5	2E-7	6E-4	6E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
64	Gadolinium-146	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	1E+3 -	1E+2 3E+2	5E-8 1E-7	2E-10 4E-10	2E-5 -	2E-4 -
64	Gadolinium-147	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	2E+3 -	4E+3 4E+3	2E-6 1E-6	6E-9 5E-9	3E-5 -	3E-4 -
64	Gadolinium-148	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	1E+1 Bone surf (2E+1) - -	8E+3 Bone surf (2E+2) 3E-2 Bone surf (6E-2)	3E-12 - 1E-11 -	- 2E-14 - 8E-14	- 3E-7 - -	- 3E-6 - -
64	Gadolinium-149	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	3E+3 -	2E+3 2E+3	9E-7 1E-6	3E-9 3E-9	4E-5 -	4E-4 -
64	Gadolinium-151	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	6E+3 - -	4E+2 Bone surf (6E+2) 1E+3	2E-7 - 5E-7	- 9E-10 2E-9	9E-5 - -	9E-4 - -
64	Gadolinium-152	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	2E+1 Bone surf (3E+1) - -	1E-2 Bone surf (2E-2) 4E-2 Bone surf (8E-2)	4E-12 - 2E-11 -	- 3E-14 - 1E-13	- 4E-7 - -	- 4E-6 - -
64	Gadolinium-153	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	5E+3 - -	1E+2 Bone surf (2E+2) 6E+2	6E-8 - 2E-7	- 3E-10 8E-10	6E-5 - -	6E-4 - -
64	Gadolinium-159	D, see ¹⁴⁵ Gd W, see ¹⁴⁵ Gd	3E+3 -	8E+3 6E+3	3E-6 2E-6	1E-8 8E-9	4E-5 -	4E-4 -
65	Terbium-147 ²	W, all compounds	9E+3	3E+4	1E-5	5E-8	1E-4	1E-3
65	Terbium-149	W, all compounds	5E+3	7E+2	3E-7	1E-9	7E-5	7E-4
65	Terbium-150	W, all compounds	5E+3	2E+4	9E-6	3E-8	7E-5	7E-4
65	Terbium-151	W, all compounds	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
65	Terbium-153	W, all compounds	5E+3	7E+3	3E-6	1E-8	7E-5	7E-4
65	Terbium-154	W, all compounds	2E+3	4E+3	2E-6	6E-9	2E-5	2E-4
65	Terbium-155	W, all compounds	6E+3	8E+3	3E-6	1E-8	8E-5	8E-4
65	Terbium-156m (5.0 h)	W, all compounds	2E+4	3E+4	1E-5	4E-8	2E-4	2E-3
65	Terbium-156m (24.4 h)	W, all compounds	7E+3	8E+3	3E-6	1E-8	1E-4	1E-3
65	Terbium-156	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
65	Terbium-157	W, all compounds	5E+4 LLI wall (5E+4)	3E+2 Bone surf (6E+2)	1E-7 - -	- 8E-10 -	- 7E-4 -	- 7E-3 -
65	Terbium-158	W, all compounds	1E+3	2E+1	8E-9	3E-11	2E-5	2E-4

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
	ALI μCi	DAC μCi/ml						
65	Terbium-160	W, all compounds	8E+2	2E+2	9E-8	3E-10	1E-5	1E-4
65	Terbium-161	W, all compounds	2E+3 LLI wall (2E+3)	2E+3	7E-7	2E-9	- 3E-5	- 3E-4
66	Dysprosium-155	W, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
66	Dysprosium-157	W, all compounds	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
66	Dysprosium-159	W, all compounds	1E+4	2E+3	1E-6	3E-9	2E-4	2E-3
66	Dysprosium-165	W, all compounds	1E+4	5E+4	2E-5	6E-8	2E-4	2E-3
66	Dysprosium-166	W, all compounds	6E+2 LLI wall (8E+2)	7E+2	3E-7	1E-9	- 1E-5	- 1E-4
67	Holmium-155 ²	W, all compounds	4E+4	2E+5	6E-5	2E-7	6E-4	6E-3
67	Holmium-157 ²	W, all compounds	3E+5	1E+6	6E-4	2E-6	4E-3	4E-2
67	Holmium-159 ²	W, all compounds	2E+5	1E+6	4E-4	1E-6	3E-3	3E-2
67	Holmium-161	W, all compounds	1E+5	4E+5	2E-4	6E-7	1E-3	1E-2
67	Holmium-162m ²	W, all compounds	5E+4	3E+5	1E-4	4E-7	7E-4	7E-3
67	Holmium-162 ²	W, all compounds	5E+5 St wall (8E+5)	2E+6	1E-3	3E-6	- 1E-2	- 1E-1
67	Holmium-164m ²	W, all compounds	1E+5	3E+5	1E-4	4E-7	1E-3	1E-2
67	Holmium-164 ²	W, all compounds	2E+5 St wall (2E+5)	6E+5	3E-4	9E-7	- 3E-3	- 3E-2
67	Holmium-166m	W, all compounds	6E+2	7E+0	3E-9	9E-12	9E-6	9E-5
67	Holmium-166	W, all compounds	9E+2 LLI wall (9E+2)	2E+3	7E-7	2E-9	- 1E-5	- 1E-4
67	Holmium-167	W, all compounds	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
68	Erbium-161	W, all compounds	2E+4	6E+4	3E-5	9E-8	2E-4	2E-3
68	Erbium-165	W, all compounds	6E+4	2E+5	8E-5	3E-7	9E-4	9E-3
68	Erbium-169	W, all compounds	3E+3 LLI wall (4E+3)	3E+3	1E-6	4E-9	- 5E-5	- 5E-4
68	Erbium-171	W, all compounds	4E+3	1E+4	4E-6	1E-8	5E-5	5E-4
68	Erbium-172	W, all compounds	1E+3 LLI wall (E+3)	1E+3	6E-7	2E-9	- 2E-5	- 2E-4
69	Thulium-162 ²	W, all compounds	7E+4 St wall (7E+4)	3E+5	1E-4	4E-7	- 1E-3	- 1E-2

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
69	Thulium-166	W, all compounds	4E+3	1E+4	6E-6	2E-8	6E-5	6E-4
69	Thulium-167	W, all compounds	2E+3 LLI wall (2E+3)	2E+3	8E-7	3E-9	- 3E-5	- 3E-4
69	Thulium-170	W, all compounds	8E+2 LLI wall (1E+3)	2E+2	9E-8	3E-10	- 1E-5	- 1E-4
69	Thulium-171	W, all compounds	1E+4 LLI wall (1E+4)	3E+2 Bone surf (6E+2)	1E-7	- 8E-10	- 2E-4	- 2E-3
69	Thulium-172	W, all compounds	7E+2 LLI wall (8E+2)	1E+3	5E-7	2E-9	- 1E-5	- 1E-4
69	Thulium-173	W, all compounds	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
69	Thulium-175 ²	W, all compounds	7E+4 St wall (9E+4)	3E+5	1E-4	4E-7	- 1E-3	- 1E-2
70	Ytterbium-162 ²	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	7E+4	3E+5	1E-4	4E-7	1E-3	1E-2
			-	3E+5	1E-4	4E-7	-	-
70	Ytterbium-166	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+3	2E+3	8E-7	3E-9	2E-5	2E-4
			-	2E+3	8E-7	3E-9	-	-
70	Ytterbium-167 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	3E+5	8E+5	3E-4	1E-6	4E-3	4E-2
			-	7E+5	3E-4	1E-6	-	-
70	Ytterbium-169	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4
			-	7E+2	3E-7	1E-9	-	-
70	Ytterbium-175	W, see ¹⁶² Yb	3E+3	4E+3	1E-6	5E-9	-	-
		LLI wall (3E+3)	-	-	-	-	4E-5	4E-4
		Y, see ¹⁶² Yb	-	3E+3	1E-6	5E-9	-	-
70	Ytterbium-177 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	2E+4	5E+4	2E-5	7E-8	2E-4	2E-3
			-	5E+4	2E-5	6E-8	-	-
70	Ytterbium-178 ²	W, see ¹⁶² Yb Y, see ¹⁶² Yb	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
			-	4E+4	2E-5	5E-8	-	-
71	Lutetium-169	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	3E+3	4E+3	2E-6	6E-9	3E-5	3E-4
			-	4E+3	2E-6	6E-9	-	-
71	Lutetium-170	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3	2E+3	9E-7	3E-9	2E-5	2E-4
			-	2E+3	8E-7	3E-9	-	-
71	Lutetium-171	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	2E+3	2E+3	8E-7	3E-9	3E-5	3E-4
			-	2E+3	8E-7	3E-9	-	-
71	Lutetium-172	W, see ¹⁶⁹ Lu Y, see ¹⁶⁹ Lu	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
			-	1E+3	5E-7	2E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
71	Lutetium-173	W, see ¹⁶⁹ Lu	5E+3	3E+2	1E-7	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (5E+2) 3E+2	-	6E-10 4E-10	-	-
71	Lutetium-174m	W, see ¹⁶⁹ Lu	2E+3	2E+2	1E-7	-	-	-
		Y, see ¹⁶⁹ Lu	LLI wall (3E+3) -	Bone surf (3E+2) 2E+2	-	5E-10 3E-10	4E-5	4E-4
71	Lutetium-174	W, see ¹⁶⁹ Lu	5E+3	1E+2	5E-8	-	7E-5	7E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (2E+2) 2E+2	-	3E-10 2E-10	-	-
71	Lutetium-176m	W, see ¹⁶⁹ Lu	8E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		Y, see ¹⁶⁹ Lu	-	2E+4	9E-6	3E-8	-	-
71	Lutetium-176	W, see ¹⁶⁹ Lu	7E+2	5E+0	2E-9	-	1E-5	1E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (1E+1) 8E+0	-	2E-11 1E-11	-	-
71	Lutetium-177m	W, see ¹⁶⁹ Lu	7E+2	1E+2	5E-8	-	1E-5	1E-4
		Y, see ¹⁶⁹ Lu	-	Bone surf (1E+2) 8E+1	-	2E-10 1E-10	-	-
71	Lutetium-177	W, see ¹⁶⁹ Lu	2E+3	2E+3	9E-7	3E-9	-	-
		Y, see ¹⁶⁹ Lu	LLI wall (3E+3) -	-	-	-	4E-5	4E-4
71	Lutetium-178m ²	W, see ¹⁶⁹ Lu	5E+4	2E+5	8E-5	3E-7	-	-
		Y, see ¹⁶⁹ Lu	St. wall (6E+4) -	-	-	-	8E-4	8E-3
71	Lutetium-178 ²	W, see ¹⁶⁹ Lu	4E+4	1E+5	5E-5	2E-7	-	-
		Y, see ¹⁶⁹ Lu	St wall (4E+4) -	-	-	-	6E-4	6E-3
71	Lutetium-179	W, see ¹⁶⁹ Lu	6E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see ¹⁶⁹ Lu	-	2E+4	6E-6	3E-8	-	-
72	Hafnium-170	D, all compounds except those given for W W, oxides, hydroxides, carbides, and nitrates	3E+3	6E+3	2E-6	8E-9	4E-5	4E-4
			-	5E+3	2E-6	6E-9	-	-
72	Hafnium-172	D, see ¹⁷⁰ Hf	1E+3	9E+0	4E-9	-	2E-5	2E-4
		W, see ¹⁷⁰ Hf	-	Bone surf (2E+1) 4E+1	-	3E-11	-	-
			-	Bone surf (6E+1)	-	8E-11	-	-
72	Hafnium-173	D, see ¹⁷⁰ Hf	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ¹⁷⁰ Hf	-	1E+4	5E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
72	Hafnium-175	D, see ¹⁷⁰ Hf	3E+3	9E+2	4E-7	-	4E-5	4E-4
				Bone surf (1E+3)	-	1E-9	-	-
		W, see ¹⁷⁰ Hf	-	1E+3	5E-7	2E-9	-	-
72	Hafnium-177m ²	D, see ¹⁷⁰ Hf	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		W, see ¹⁷⁰ Hf	-	9E+4	4E-5	1E-7	-	-
72	Hafnium-178m	D, see ¹⁷⁰ Hf	3E+2	1E+0	5E-10	-	3E-6	3E-5
				Bone surf (2E+0)	-	3E-12	-	-
		W, see ¹⁷⁰ Hf	-	5E+0	2E-9	-	-	-
				Bone surf (9E+0)	-	1E-11	-	-
72	Hafnium-179m	D, see ¹⁷⁰ Hf	1E+3	3E+2	1E-7	-	1E-5	1E-4
				Bone surf (6E+2)	-	8E-10	-	-
		W, see ¹⁷⁰ Hf	-	6E+2	3E-7	8E-10	-	-
72	Hafnium-180m	D, see ¹⁷⁰ Hf	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see ¹⁷⁰ Hf	-	3E+4	1E-5	4E-8	-	-
72	Hafnium-181	D, see ¹⁷⁰ Hf	1E+3	2E+2	7E-8	-	2E-5	2E-4
				Bone surf (4E+2)	-	6E-10	-	-
		W, see ¹⁷⁰ Hf	-	4E+2	2E-7	6E-10	-	-
72	Hafnium-182m ²	D, see ¹⁷⁰ Hf	4E+4	9E+4	4E-5	1E-7	5E-4	5E-3
		W, see ¹⁷⁰ Hf	-	1E+5	6E-5	2E-7	-	-
72	Hafnium-182	D, see ¹⁷⁰ Hf	2E+2	8E-1	3E-10	-	-	-
				Bone surf (4E+2)	-	2E-12	5E-6	5E-5
		W, see ¹⁷⁰ Hf	-	3E+0	1E-9	-	-	-
				Bone surf (7E+0)	-	1E-11	-	-
72	Hafnium-183 ²	D, see ¹⁷⁰ Hf	2E+4	5E+4	2E-5	6E-8	3E-4	3E-3
		W, see ¹⁷⁰ Hf	-	6E+4	2E-5	8E-8	-	-
72	Hafnium-184	D, see ¹⁷⁰ Hf	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ¹⁷⁰ Hf	-	6E+3	3E-6	9E-9	-	-
73	Tantalum-172 ²	W, all compounds except those given for Y Y, elemental Ta, oxides, hydroxides, halides, carbides, nitrates, and nitrides	4E+4	1E+5	5E-5	2E-7	5E-4	5E-3
				1E+5	4E-5	1E-7	-	-
73	Tantalum-173	W, see ¹⁷² Ta Y, see ¹⁷² Ta	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
			-	2E+4	7E-6	2E-8	-	-
73	Tantalum-174 ²	W, see ¹⁷² Ta Y, see ¹⁷² Ta	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
			-	9E+4	4E-5	1E-7	-	-
73	Tantalum-175	W, see ¹⁷² Ta Y, see ¹⁷² Ta	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
			-	1E+4	6E-6	2E-8	-	-
73	Tantalum-176	W, see ¹⁷² Ta Y, see ¹⁷² Ta	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
			-	1E+4	5E-6	2E-8	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
			ALI μCi	DAC μCi/ml				
73	Tantalum-177	W, see ¹⁷² Ta Y, see ¹⁷² Ta	1E+4 -	2E+4 2E+4	8E-6 7E-6	3E-8 2E-8	2E-4 -	2E-3 -
73	Tantalum-178	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+4 -	9E+4 7E+4	4E-5 3E-5	1E-7 1E-7	2E-4 -	2E-3 -
73	Tantalum-179	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+4 -	5E+3 9E+2	2E-6 4E-7	8E-9 1E-9	3E-4 -	3E-3 -
73	Tantalum-180m	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+4 -	7E+4 6E+4	3E-5 2E-5	9E-8 8E-8	3E-4 -	3E-3 -
73	Tantalum-180	W, see ¹⁷² Ta Y, see ¹⁷² Ta	1E+3 -	4E+2 2E+1	2E-7 1E-8	6E-10 3E-11	2E-5 -	2E-4 -
73	Tantalum-182m ²	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+5 St wall (2E+5) -	5E+5 - 4E+5	2E-4 - 2E-4	8E-7 - 6E-7	- 3E-3 -	- 3E-2 -
73	Tantalum-182	W, see ¹⁷² Ta Y, see ¹⁷² Ta	8E+2 -	3E+2 1E+2	1E-7 6E-8	5E-10 2E-10	1E-5 -	1E-4 -
73	Tantalum-183	W, see ¹⁷² Ta Y, see ¹⁷² Ta	9E+2 LLI wall (1E+3) -	1E+3 - 1E+3	5E-7 - 4E-7	2E-9 - 1E-9	- 2E-5 -	- 2E-4 -
73	Tantalum-184	W, see ¹⁷² Ta Y, see ¹⁷² Ta	2E+3 -	5E+3 5E+3	2E-6 2E-6	8E-9 7E-9	3E-5 -	3E-4 -
73	Tantalum-185 ²	W, see ¹⁷² Ta Y, see ¹⁷² Ta	3E+4 -	7E+4 6E+4	3E-5 3E-5	1E-7 9E-8	4E-4 -	4E-3 -
73	Tantalum-186 ²	W, see ¹⁷² Ta Y, see ¹⁷² Ta	5E+4 St wall (7E+4) -	2E+5 - 2E+5	1E-4 - 9E-5	3E-7 - 3E-7	- 1E-3 -	- 1E-2 -
74	Tungsten-176	D, all compounds	1E+4	5E+4	2E-5	7E-8	1E-4	1E-3
74	Tungsten-177	D, all compounds	2E+4	9E+4	4E-5	1E-7	3E-4	3E-3
74	Tungsten-178	D, all compounds	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
74	Tungsten-179 ²	D, all compounds	5E+5	2E+6	7E-4	2E-6	7E-3	7E-2
74	Tungsten-181	D, all compounds	2E+4	3E+4	1E-5	5E-8	2E-4	2E-3
74	Tungsten-185	D, all compounds	2E+3 LLI wall (3E+3)	7E+3 -	3E-6 -	9E-9 -	- 4E-5	- 4E-4
74	Tungsten-187	D, all compounds	2E+3	9E+3	4E-6	1E-8	3E-5	3E-4
74	Tungsten-188	D, all compounds	4E+2 LLI wall (5E+2)	1E+3 -	5E-7 -	2E-9 -	- 7E-6	- 7E-5
75	Rhenium-177 ²	D, all compounds except those given for W	9E+4 St wall (1E+5)	3E+5 -	1E-4 -	4E-7 -	- 2E-3	- 2E-2

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			ALI μCi	DAC μCi/ml				
		W, oxides, hydroxides, and nitrates	-	4E+5	1E-4	5E-7	-	-
75	Rhenium-178 ²	D, see ¹⁷⁷ Re	7E+4	3E+5	1E-4	4E-7	-	-
		St wall (1E+5)	-	-	-	-	1E-3	1E-2
		W, see ¹⁷⁷ Re	-	3E+5	1E-4	4E-7	-	-
75	Rhenium-181	D, see ¹⁷⁷ Re	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
		W, see ¹⁷⁷ Re	-	9E+3	4E-6	1E-8	-	-
75	Rhenium-182 (12.7 h)	D, see ¹⁷⁷ Re	7E+3	1E+4	5E-6	2E-8	9E-5	9E-4
		W, see ¹⁷⁷ Re	-	2E+4	6E-6	2E-8	-	-
75	Rhenium-182 (64.0 h)	D, see ¹⁷⁷ Re	1E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+3	9E-7	3E-9	-	-
75	Rhenium-184m	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	4E+2	2E-7	6E-10	-	-
75	Rhenium-184	D, see ¹⁷⁷ Re	2E+3	4E+3	1E-6	5E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	1E+3	6E-7	2E-9	-	-
75	Rhenium-186m	D, see ¹⁷⁷ Re	1E+3	2E+3	7E-7	-	-	-
		St wall (2E+3)	-	St wall (2E+3)	-	3E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	2E+2	6E-8	2E-10	-	-
75	Rhenium-186	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see ¹⁷⁷ Re	-	2E+3	7E-7	2E-9	-	-
75	Rhenium-187	D, see ¹⁷⁷ Re	6E+5	8E+5	4E-4	-	8E-3	8E-2
		St wall (9E+5)	-	St wall (9E+5)	-	1E-6	-	-
		W, see ¹⁷⁷ Re	-	1E+5	4E-5	1E-7	-	-
75	Rhenium-188m ²	D, see ¹⁷⁷ Re	8E+4	1E+5	6E-5	2E-7	1E-3	1E-2
		W, see ¹⁷⁷ Re	-	1E+5	6E-5	2E-7	-	-
75	Rhenium-188	D, see ¹⁷⁷ Re	2E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		W, see ¹⁷⁷ Re	-	3E+3	1E-6	4E-9	-	-
75	Rhenium-189	D, see ¹⁷⁷ Re	3E+3	5E+3	2E-6	7E-9	4E-5	4E-4
		W, see ¹⁷⁷ Re	-	4E+3	2E-6	6E-9	-	-
76	Osmium-180 ²	D, all compounds except those given for W and Y	1E+5	4E+5	2E-4	5E-7	1E-3	1E-2
		W, halides and nitrates	-	5E+5	2E-4	7E-7	-	-
		Y, oxides and hydroxides	-	5E+5	2E-4	6E-7	-	-
76	Osmium-181 ²	D, see ¹⁸⁰ Os	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	5E+4	2E-5	6E-8	-	-
		Y, see ¹⁸⁰ Os	-	4E+4	2E-5	6E-8	-	-
76	Osmium-182	D, see ¹⁸⁰ Os	2E+3	6E+3	2E-6	8E-9	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
		Y, see ¹⁸⁰ Os	-	4E+3	2E-6	6E-9	-	-
76	Osmium-185	D, see ¹⁸⁰ Os	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-
		Y, see ¹⁸⁰ Os	-	8E+2	3E-7	1E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
76	Osmium-189m	D, see ¹⁸⁰ Os	8E+4	2E+5	1E-4	3E-7	1E-3	1E-2
		W, see ¹⁸⁰ Os	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁸⁰ Os	-	2E+5	7E-5	2E-7	-	-
76	Osmium-191m	D, see ¹⁸⁰ Os	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see ¹⁸⁰ Os	-	2E+4	8E-6	3E-8	-	-
		Y, see ¹⁸⁰ Os	-	2E+4	7E-6	2E-8	-	-
76	Osmium-191	D, see ¹⁸⁰ Os	2E+3	2E+3	9E-7	3E-9	-	-
		LLI wall (3E+3)	-	-	-	3E-5	3E-4	
		W, see ¹⁸⁰ Os	-	2E+3	7E-7	2E-9	-	-
76	Osmium-193	Y, see ¹⁸⁰ Os	-	1E+3	6E-7	2E-9	-	-
		D, see ¹⁸⁰ Os	2E+3	5E+3	2E-6	6E-9	-	-
		LLI wall (2E+3)	-	-	-	2E-5	2E-4	
76	Osmium-194	W, see ¹⁸⁰ Os	-	3E+3	1E-6	4E-9	-	-
		Y, see ¹⁸⁰ Os	-	3E+3	1E-6	4E-9	-	-
		D, see ¹⁸⁰ Os	4E+2	4E+1	2E-8	6E-11	-	-
76	Osmium-194	LLI wall (6E+2)	-	-	-	8E-6	8E-5	
		W, see ¹⁸⁰ Os	-	6E+1	2E-8	8E-11	-	-
		Y, see ¹⁸⁰ Os	-	8E+0	3E-9	1E-11	-	-
77	Iridium-182 ²	D, all compounds except those given for W and Y	4E+4	1E+5	6E-5	2E-7	-	-
		St wall (4E+4)	-	-	-	6E-4	6E-3	
		W, halides, nitrates, and metallic iridium	-	2E+5	6E-5	2E-7	-	-
77	Iridium-184	Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
		D, see ¹⁸² Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	5E-8	-	-
77	Iridium-185	Y, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		D, see ¹⁸² Ir	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ¹⁸² Ir	-	1E+4	5E-6	2E-8	-	-
77	Iridium-186	Y, see ¹⁸² Ir	-	1E+4	4E-6	1E-8	-	-
		D, see ¹⁸² Ir	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see ¹⁸² Ir	-	6E+3	3E-6	9E-9	-	-
77	Iridium-187	Y, see ¹⁸² Ir	-	6E+3	2E-6	8E-9	-	-
		D, see ¹⁸² Ir	1E+4	3E+4	1E-5	5E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
77	Iridium-188	Y, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		D, see ¹⁸² Ir	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		W, see ¹⁸² Ir	-	4E+3	1E-6	5E-9	-	-
77	Iridium-189	Y, see ¹⁸² Ir	-	3E+3	1E-6	5E-9	-	-
		D, see ¹⁸² Ir	5E+3	5E+3	2E-6	7E-9	-	-
		LLI wall (5E+3)	-	-	-	7E-5	7E-4	
77	Iridium-190m ²	W, see ¹⁸² Ir	-	4E+3	2E-6	5E-9	-	-
		Y, see ¹⁸² Ir	-	4E+3	1E-6	5E-9	-	-
		D, see ¹⁸² Ir	2E+5	2E+5	8E-5	3E-7	2E-3	2E-2
77	Iridium-190m ²	W, see ¹⁸² Ir	-	2E+5	9E-5	3E-7	-	-
		Y, see ¹⁸² Ir	-	2E+5	8E-5	3E-7	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
77	Iridium-190	D, see ¹⁸² Ir	1E+3	9E+2	4E-7	1E-9	1E-5	1E-4
		W, see ¹⁸² Ir	-	1E+3	4E-7	1E-9	-	-
		Y, see ¹⁸² Ir	-	9E+2	4E-7	1E-9	-	-
77	Iridium-192m	D, see ¹⁸² Ir	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
		W, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
		Y, see ¹⁸² Ir	-	2E+1	6E-9	2E-11	-	-
77	Iridium-192	D, see ¹⁸² Ir	9E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		W, see ¹⁸² Ir	-	4E+2	2E-7	6E-10	-	-
		Y, see ¹⁸² Ir	-	2E+2	9E-8	3E-10	-	-
77	Iridium-194m	D, see ¹⁸² Ir	6E+2	9E+1	4E-8	1E-10	9E-6	9E-5
		W, see ¹⁸² Ir	-	2E+2	7E-8	2E-10	-	-
		Y, see ¹⁸² Ir	-	1E+2	4E-8	1E-10	-	-
77	Iridium-194	D, see ¹⁸² Ir	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see ¹⁸² Ir	-	2E+3	9E-7	3E-9	-	-
		Y, see ¹⁸² Ir	-	2E+3	8E-7	3E-9	-	-
77	Iridium-195m	D, see ¹⁸² Ir	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see ¹⁸² Ir	-	3E+4	1E-5	4E-8	-	-
		Y, see ¹⁸² Ir	-	2E+4	9E-6	3E-8	-	-
77	Iridium-195	D, see ¹⁸² Ir	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ¹⁸² Ir	-	5E+4	2E-5	7E-8	-	-
		Y, see ¹⁸² Ir	-	4E+4	2E-5	6E-8	-	-
78	Platinum-186	D, all compounds	1E+4	4E+4	2E-5	5E-8	2E-4	2E-3
78	Platinum-188	D, all compounds	2E+3	2E+3	7E-7	2E-9	2E-5	2E-4
78	Platinum-189	D, all compounds	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
78	Platinum-191	D, all compounds	4E+3	8E+3	4E-6	1E-8	5E-5	5E-4
78	Platinum-193m	D, all compounds	3E+3	6E+3	3E-6	8E-9	-	-
78	Platinum-193	D, all compounds	LLI wall (3E+4) 4E+4	2E+4	1E-5	3E-8	4E-5	4E-4
78	Platinum-195m	D, all compounds	LLI wall (5E+4) 2E+3	-	-	-	6E-4	6E-3
78	Platinum-195m	D, all compounds	2E+3	4E+3	2E-6	6E-9	-	-
78	Platinum-197m ²	D, all compounds	LLI wall (2E+3)	-	-	-	3E-5	3E-4
78	Platinum-197m ²	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
78	Platinum-199 ²	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
79	Gold-193	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, halides and nitrates	-	2E+4	9E-6	3E-8	-	-
		Y, oxides and hydroxides	-	2E+4	8E-6	3E-8	-	-
79	Gold-194	D, see ¹⁹³ Au	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see ¹⁹³ Au	-	5E+3	2E-6	8E-9	-	-
		Y, see ¹⁹³ Au	-	5E+3	2E-6	7E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml			μCi/ml		
79	Gold-195	D, see ¹⁹³ Au	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see ¹⁹³ Au	-	1E+3	6E-7	2E-9	-	-
		Y, see ¹⁹³ Au	-	4E+2	2E-7	6E-10	-	-
79	Gold-198m	D, see ¹⁹³ Au	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see ¹⁹³ Au	-	1E+3	5E-7	2E-9	-	-
		Y, see ¹⁹³ Au	-	1E+3	5E-7	2E-9	-	-
79	Gold-198	D, see ¹⁹³ Au	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see ¹⁹³ Au	-	2E+3	8E-7	3E-9	-	-
		Y, see ¹⁹³ Au	-	2E+3	7E-7	2E-9	-	-
79	Gold-199	D, see ¹⁹³ Au	3E+3	9E+3	4E-6	1E-8	-	-
		LLI wall (3E+3)	-	-	-	-	4E-5	4E-4
		W, see ¹⁹³ Au	-	4E+3	2E-6	6E-9	-	-
79	Gold-200m	D, see ¹⁹³ Au	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see ¹⁹³ Au	-	3E+3	1E-6	4E-9	-	-
		Y, see ¹⁹³ Au	-	2E+4	1E-6	3E-9	-	-
79	Gold-200 ²	D, see ¹⁹³ Au	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see ¹⁹³ Au	-	8E+4	3E-5	1E-7	-	-
		Y, see ¹⁹³ Au	-	7E+4	3E-5	1E-7	-	-
79	Gold-201 ²	D, see ¹⁹³ Au	7E+4	2E+5	9E-5	3E-7	-	-
		St wall (9E+4)	-	-	-	-	1E-3	1E-2
		W, see ¹⁹³ Au	-	2E+5	1E-4	3E-7	-	-
80	Mercury-193m	Y, see ¹⁹³ Au	-	2E+5	9E-5	3E-7	-	-
		Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
80	Mercury-193	D, sulfates	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, oxides, hydroxides, halides, nitrates, and sulfides	-	8E+3	3E-6	1E-8	-	-
		Vapor	-	3E+4	1E-5	4E-8	-	-
80	Mercury-194	Organic D	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		D, see ^{193m} Hg	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see ^{193m} Hg	-	4E+4	2E-5	6E-8	-	-
80	Mercury-195m	Vapor	-	3E+1	1E-8	4E-11	-	-
		Organic D	2E+1	3E+1	1E-8	4E-11	2E-7	2E-6
		D, see ^{193m} Hg	8E+2	4E+1	2E-8	6E-11	1E-5	1E-4
80	Mercury-195	W, see ^{193m} Hg	-	1E+2	5E-8	2E-10	-	-
		Vapor	-	4E+3	2E-6	6E-9	-	-
		Organic D	3E+3	6E+3	3E-6	8E-9	4E-5	4E-4
80	Mercury-197m	D, see ^{193m} Hg	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	4E+3	2E-6	5E-9	-	-
		Vapor	-	3E+4	1E-5	4E-8	-	-
80	Mercury-197m	Organic D	2E+4	5E+4	2E-5	6E-8	2E-4	2E-3
		D, see ^{193m} Hg	1E+4	4E+4	1E-5	5E-8	2E-4	2E-3
		W, see ^{193m} Hg	-	3E+4	1E-5	5E-8	-	-
80	Mercury-197m	Vapor	-	5E+3	2E-6	7E-9	-	-
		Organic D	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		D, see ^{193m} Hg	3E+3	7E+3	3E-6	1E-8	4E-5	4E-4
80	Mercury-197m	W, see ^{193m} Hg	-	5E+3	2E-6	7E-9	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
				ALI μCi	DAC μCi/ml			
80	Mercury-197	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	7E+3	1E+4	6E-6	2E-8	9E-5	9E-4
		D, see ^{193m} Hg	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see ^{193m} Hg	-	9E+3	4E-6	1E-8	-	-
80	Mercury-199m ²	Vapor	-	8E+4	3E-5	1E-7	-	-
		Organic D	6E+4	2E+5	7E-5	2E-7	-	-
		St wall (1E+5)	-	-	-	-	1E-3	1E-2
		D, see ^{193m} Hg	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
		W, see ^{193m} Hg	-	2E+5	7E-5	2E-7	-	-
80	Mercury-203	Vapor	-	8E+2	4E-7	1E-9	-	-
		Organic D	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
		D, see ^{193m} Hg	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		W, see ^{193m} Hg	-	1E+3	5E-7	2E-9	-	-
81	Thallium-194m ²	D, all compounds	5E+4	2E+5	6E-5	2E-7	-	-
		St wall (7E+4)	-	-	-	-	1E-3	1E-2
81	Thallium-194 ²	D, all compounds	3E+5	6E+5	2E-4	8E-7	-	-
		St wall (3E+5)	-	-	-	-	4E-3	4E-2
81	Thallium-195 ²	D, all compounds	6E+4	1E+5	5E-5	2E-7	9E-4	9E-3
81	Thallium-197	D, all compounds	7E+4	1E+5	5E-5	2E-7	1E-3	1E-2
81	Thallium-198m ²	D, all compounds	3E+4	5E+4	2E-5	8E-8	4E-4	4E-3
81	Thallium-198	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
81	Thallium-199	D, all compounds	6E+4	8E+4	4E-5	1E-7	9E-4	9E-3
81	Thallium-200	D, all compounds	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
81	Thallium-201	D, all compounds	2E+4	2E+4	9E-6	3E-8	2E-4	2E-3
81	Thallium-202	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
81	Thallium-204	D, all compounds	2E+3	2E+3	9E-7	3E-9	2E-5	2E-4
82	Lead-195m ²	D, all compounds	6E+4	2E+5	8E-5	3E-7	8E-4	8E-3
82	Lead-198	D, all compounds	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
82	Lead-199 ²	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
82	Lead-200	D, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
82	Lead-201	D, all compounds	7E+3	2E+4	8E-6	3E-8	1E-4	1E-3
82	Lead-202m	D, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
82	Lead-202	D, all compounds	1E+2	5E+1	2E-8	7E-11	2E-6	2E-5
82	Lead-203	D, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
82	Lead-205	D, all compounds	4E+3	1E+3	6E-7	2E-9	5E-5	5E-4
82	Lead-209	D, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
82	Lead-210	D, all compounds	6E-1 Bone surf (1E+0)	2E-1 Bone surf (4E-1)	1E-10 -	- 6E-13	- 1E-8	- 1E-7
82	Lead-211 ²	D, all compounds	1E+4	6E+2	3E-7	9E-10	2E-4	2E-3
82	Lead-212	D, all compounds	8E+1 Bone surf (1E+2)	3E+1 -	1E-8 -	5E-11 -	- 2E-6	- 2E-5
82	Lead-214 ²	D, all compounds	9E+3	8E+2	3E-7	1E-9	1E-4	1E-3
83	Bismuth-200 ²	D, nitrates W, all other compounds	3E+4 -	8E+4 1E+5	4E-5 4E-5	1E-7 1E-7	4E-4 -	4E-3 -
83	Bismuth-201 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+4 -	3E+4 4E+4	1E-5 2E-5	4E-8 5E-8	2E-4 -	2E-3 -
83	Bismuth-202 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+4 -	4E+4 8E+4	2E-5 3E-5	6E-8 1E-7	2E-4 -	2E-3 -
83	Bismuth-203	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	2E+3 -	7E+3 6E+3	3E-6 3E-6	9E-9 9E-9	3E-5 -	3E-4 -
83	Bismuth-205	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+3 -	3E+3 1E+3	1E-6 5E-7	3E-9 2E-9	2E-5 -	2E-4 -
83	Bismuth-206	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	6E+2 -	1E+3 9E+2	6E-7 4E-7	2E-9 1E-9	9E-6 -	9E-5 -
83	Bismuth-207	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	1E+3 -	2E+3 4E+2	7E-7 1E-7	2E-9 5E-10	1E-5 -	1E-4 -
83	Bismuth-210m	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	4E+1 Kidneys (6E+1) -	5E+0 Kidneys (6E+0) 7E-1	2E-9 - 3E-10	- 9E-12 9E-13	- 8E-7 -	- 8E-6 -
83	Bismuth-210	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	8E+2 - -	2E+2 Kidneys (4E+2) 3E+1	1E-7 - 1E-8	- 5E-10 4E-11	1E-5 - -	1E-4 - -
83	Bismuth-212 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	5E+3 -	2E+2 3E+2	1E-7 1E-7	3E-10 4E-10	7E-5 -	7E-4 -
83	Bismuth-213 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	7E+3 -	3E+2 4E+2	1E-7 1E-7	4E-10 5E-10	1E-4 -	1E-3 -
83	Bismuth-214 ²	D, see ²⁰⁰ Bi W, see ²⁰⁰ Bi	2E+4 St wall (2E+4) -	8E+2 - 9E-2	3E-7 - 4E-7	1E-9 - 1E-9	- 3E-4 -	- 3E-3 -
84	Polonium-203 ²	D, all compounds except those given for W W, oxides, hydroxides, and nitrates	3E+4 -	6E+4 9E+4	3E-5 4E-5	9E-8 1E-7	3E-4 -	3E-3 -
84	Polonium-205 ²	D, see ²⁰³ Po W, see ²⁰³ Po	2E+4 -	4E+4 7E+4	2E-5 3E-5	5E-8 1E-7	3E-4 -	3E-3 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	
		ALI μCi	DAC $\mu\text{Ci/ml}$			$\mu\text{Ci/ml}$		
84	Polonium-207	D, see ^{203}Po W, see ^{203}Po	8E+3 -	3E+4 3E+4	1E-5 1E-5	3E-8 4E-8	1E-4 -	1E-3 -
84	Polonium-210	D, see ^{203}Po W, see ^{203}Po	3E+0 -	6E-1 6E-1	3E-10 3E-10	9E-13 9E-13	4E-8 -	4E-7 -
85	Astatine-207 ²	D, halides W	6E+3 -	3E+3 2E+3	1E-6 9E-7	4E-9 3E-9	8E-5 -	8E-4 -
85	Astatine-211	D, halides W	1E+2 -	8E+1 5E+1	3E-8 2E-8	1E-10 8E-11	2E-6 -	2E-5 -
86	Radon-220	With daughters removed With daughters present	- -	2E+4 2E+1 (or 12 working level months)	7E-6 9E-9	2E-8 3E-11 (or 1.0 working level)	- -	- -
86	Radon-222	With daughters removed With daughters present	- -	1E+4 1E+2 (or 4 working level months)	4E-6 3E-8	1E-8 1E-10 (or 0.33 working level)	- -	- -
87	Francium-222 ²	D, all compounds	2E+3	5E+2	2E-7	6E-10	3E-5	3E-4
87	Francium-223 ²	D, all compounds	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
88	Radium-223	W, all compounds	5E+0 Bone surf (9E+0)	7E-1 -	3E-10 -	9E-13 -	- 1E-7	- 1E-6
88	Radium-224	W, all compounds	8E+0 Bone surf (2E+1)	2E+0 -	7E-10 -	2E-12 -	- 2E-7	- 2E-6
88	Radium-225	W, all compounds	8E+0 Bone surf (2E+1)	7E-1 -	3E-10 -	9E-13 -	- 2E-7	- 2E-6
88	Radium-226	W, all compounds	2E+0 Bone surf (5E+0)	6E-1 -	3E-10 -	9E-13 -	- 6E-8	- 6E-7
88	Radium-227 ²	W, all compounds	2E+4 Bone surf (2E+4)	1E+4 Bone surf (2E+4)	6E-6 -	- 3E-8	- 3E-4	- 3E-3
88	Radium-228	W, all compounds	2E+0 Bone surf (4E+0)	1E+0 -	5E-10 -	2E-12 -	- 6E-8	- 6E-7
89	Actinium-224	D, all compounds except those given for W and Y	2E+3 LLI wall (2E+3)	3E+1 Bone surf (4E+1)	1E-8 -	- 5E-11	- 3E-5	- 3E-4
		W, halides and nitrates Y, oxides and hydroxides	- -	5E+1 5E+1	2E-8 2E-8	7E-11 6E-11	- -	- -
89	Actinium-225	D, see ^{224}Ac	5E+1 LLI wall (5E+1)	3E-1 Bone surf (5E-1)	1E-10 -	- 7E-13	- 7E-7	- 7E-6
		W, see ^{224}Ac Y, see ^{224}Ac	- -	6E-1 6E-1	3E-10 3E-10	9E-13 9E-13	- -	- -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml					
89	Actinium-226	D, see ²²⁴ Ac	1E+2	3E+0	1E-9	-	-	-
			LLI wall (1E+2)	Bone surf (4E+0)	-	5E-12	2E-6	2E-5
		W, see ²²⁴ Ac	-	5E+0	2E-9	7E-12	-	-
		Y, see ²²⁴ Ac	-	5E+0	2E-9	6E-12	-	-
89	Actinium-227	D, see ²²⁴ Ac	2E-1	4E-4	2E-13	-	-	-
			Bone surf (4E-1)	Bone surf (8E-4)	-	1E-15	5E-9	5E-8
		W, see ²²⁴ Ac	-	2E-3	7E-13	-	-	-
		Y, see ²²⁴ Ac	-	Bone surf (3E-3)	-	4E-15	-	-
			-	4E-3	2E-12	6E-15	-	-
89	Actinium-228	D, see ²²⁴ Ac	2E+3	9E+0	4E-9	-	3E-5	3E-4
			-	Bone surf (2E+1)	-	2E-11	-	-
		W, see ²²⁴ Ac	-	4E+1	2E-8	-	-	-
		Y, see ²²⁴ Ac	-	Bone surf (6E+1)	-	8E-11	-	-
			-	4E+1	2E-8	6E-11	-	-
90	Thorium-226 ²	W, all compounds except those given for Y	5E+3	2E+2	6E-8	2E-10	-	-
			St wall (5E+3)	-	-	-	7E-5	7E-4
90	Thorium-227	Y, oxides and hydroxides	-	1E+2	6E-8	2E-10	-	-
		W, see ²²⁶ Th	1E+2	3E-1	1E-10	5E-13	2E-6	2E-5
		Y, see ²²⁶ Th	-	3E-1	1E-10	5E-13	-	-
90	Thorium-228	W, see ²²⁶ Th	6E+0	1E-2	4E-12	-	-	-
			Bone surf (1E+1)	Bone surf (2E-2)	-	3E-14	2E-7	2E-6
		Y, see ²²⁶ Th	-	2E-2	7E-12	2E-14	-	-
90	Thorium-229	W, see ²²⁶ Th	6E-1	9E-4	4E-13	-	-	-
			Bone surf (1E+0)	Bone surf (2E-3)	-	3E-15	2E-8	2E-7
		Y, see ²²⁶ Th	-	2E-3	1E-12	-	-	-
			-	Bone surf (3E-3)	-	4E-15	-	-
90	Thorium-230	W, see ²²⁶ Th	4E+0	6E-3	3E-12	-	-	-
			Bone surf (9E+0)	Bone surf (2E-2)	-	2E-14	1E-7	1E-6
		Y, see ²²⁶ Th	-	2E-2	6E-12	-	-	-
			-	Bone surf (2E-2)	-	3E-14	-	-
90	Thorium-231	W, see ²²⁶ Th	4E+3	6E+3	3E-6	9E-9	5E-5	5E-4
		Y, see ²²⁶ Th	-	6E+3	3E-6	9E-9	-	-
90	Thorium-232	W, see ²²⁶ Th	7E-1	1E-3	5E-13	-	-	-
			Bone surf (2E+0)	Bone surf (3E-3)	-	4E-15	3E-8	3E-7
		Y, see ²²⁶ Th	-	3E-3	1E-12	-	-	-
			-	Bone surf (4E-3)	-	6E-15	-	-
90	Thorium-234	W, see ²²⁶ Th	3E+2	2E+2	8E-8	3E-10	-	-
			LLI wall (4E+2)	-	-	-	5E-6	5E-5
		Y, see ²²⁶ Th	-	2E+2	6E-8	2E-10	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
			ALI μCi	DAC $\mu\text{Ci/ml}$				
91	Protactinium-227 ²	W, all compounds except those given for Y	4E+3	1E+2	5E-8	2E-10	5E-5	5E-4
		Y, oxides and hydroxides	-	1E+2	4E-8	1E-10	-	-
91	Protactinium-228	W, see ²²⁷ Pa	1E+3	1E+1	5E-9	-	2E-5	2E-4
		Y, see ²²⁷ Pa	-	Bone surf (2E+1)	-	3E-11	-	-
91	Protactinium-230	W, see ²²⁷ Pa	6E+2	5E+0	2E-9	7E-12	-	-
		Y, see ²²⁷ Pa	Bone surf (9E+2)	-	-	-	1E-5	1E-4
91	Protactinium-231	W, see ²²⁷ Pa	2E-1	2E-3	6E-13	-	-	-
		Y, see ²²⁷ Pa	Bone surf (5E-1)	Bone surf (4E-3)	-	6E-15	6E-9	6E-8
91	Protactinium-232	W, see ²²⁷ Pa	1E+3	2E+1	9E-9	-	2E-5	2E-4
		Y, see ²²⁷ Pa	-	Bone surf (6E+1)	-	8E-11	-	-
91	Protactinium-233	W, see ²²⁷ Pa	1E+3	7E+2	3E-7	1E-9	-	-
		Y, see ²²⁷ Pa	LLI wall (2E+3)	-	-	-	2E-5	2E-4
91	Protactinium-234	W, see ²²⁷ Pa	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		Y, see ²²⁷ Pa	-	7E+3	3E-6	9E-9	-	-
92	Uranium-230	D, UF ₆ , UO ₂ F ₂ , UO ₂ (NO ₃) ₂	4E+0	4E-1	2E-10	-	-	-
		W, UO ₃ , UF ₄ , UCl ₄	Bone surf (6E+0)	Bone surf (6E-1)	-	8E-13	8E-8	8E-7
92	Uranium-231	D, see ²³⁰ U	5E+3	8E+3	3E-6	1E-8	-	-
		W, see ²³⁰ U	LLI wall (4E+3)	-	-	-	6E-5	6E-4
92	Uranium-232	D, see ²³⁰ U	2E+0	2E-1	9E-11	-	-	-
		W, see ²³⁰ U	Bone surf (4E+0)	Bone surf (4E-1)	-	6E-13	6E-8	6E-7
92	Uranium-233	D, see ²³⁰ U	1E+1	1E+0	5E-10	-	-	-
		W, see ²³⁰ U	Bone surf (2E+1)	Bone surf (2E+0)	-	3E-12	3E-7	3E-6
		Y, see ²³⁰ U	-	7E-1	3E-10	1E-12	-	-
			-	4E-2	2E-11	5E-14	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
92	Uranium-234 ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	7E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	5E-14	-	-
92	Uranium-235 ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
92	Uranium-236	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
92	Uranium-237	D, see ²³⁰ U	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
		W, see ²³⁰ U	-	2E+3	7E-7	2E-9	-	-
		Y, see ²³⁰ U	-	2E+3	6E-7	2E-9	-	-
92	Uranium-238 ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	1E-12	-	-
		Y, see ²³⁰ U	-	4E-2	2E-11	6E-14	-	-
92	Uranium-239 ²	D, see ²³⁰ U	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		W, see ²³⁰ U	-	2E+5	7E-5	2E-7	-	-
		Y, see ²³⁰ U	-	2E+5	6E-5	2E-7	-	-
92	Uranium-240	D, see ²³⁰ U	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see ²³⁰ U	-	3E+3	1E-6	4E-9	-	-
		Y, see ²³⁰ U	-	2E+3	1E-6	3E-9	-	-
92	Uranium-natural ³	D, see ²³⁰ U	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see ²³⁰ U	-	8E-1	3E-10	9E-13	-	-
		Y, see ²³⁰ U	-	5E-2	2E-11	9E-14	-	-
93	Neptunium-232 ²	W, all compounds	1E+5 -	2E+3 Bone surf (5E+2)	7E-7 -	- 6E-9	2E-3 -	2E-2 -
93	Neptunium-233 ²	W, all compounds	8E+5	3E+6	1E-3	4E-6	1E-2	1E-1
93	Neptunium-234	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
93	Neptunium-235	W, all compounds	2E+4 LLI wall (2E+4)	8E+2 Bone surf (1E+3)	3E-7 -	- 2E-9	- 3E-4	- 3E-3
93	Neptunium-236 (1.15E+5 y)	W, all compounds	3E+0 Bone surf (6E+0)	2E-2 Bone surf (5E-2)	9E-12 -	- 8E-14	- 9E-8	- 9E-7
93	Neptunium-236 (22.5 h)	W, all compounds	3E+3 Bone surf (4E+3)	3E+1 Bone surf (7E+1)	1E-8 -	- 1E-10	- 5E-5	- 5E-4

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
93	Neptunium-237	W, all compounds	5E-1 Bone surf (1E+0)	4E-3 Bone surf (1E-2)	2E-12 -	- 1E-14	- 2E-8	- 2E-7
93	Neptunium-238	W, all compounds	1E+3 -	6E+1 Bone surf (2E+2)	3E-8 -	- 2E-10	2E-5 -	2E-4 -
93	Neptunium-239	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	9E-7 -	3E-9 -	- 2E-5	- 2E-4
93	Neptunium-240 ²	W, all compounds	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
94	Plutonium-234	W, all compounds except PuO ₂ Y, PuO ₂	8E+3 -	2E+2 2E+2	9E-8 8E-8	3E-10 3E-10	1E-4 -	1E-3 -
94	Plutonium-235 ²	W, see ²³⁴ Pu Y, see ²³⁴ Pu	9E+5 -	3E+6 3E+6	1E-3 1E-3	4E-6 3E-6	1E-2 -	1E-1 -
94	Plutonium-236	W, see ²³⁴ Pu Y, see ²³⁴ Pu	2E+0 Bone surf (4E+0) -	2E-2 Bone surf (4E-2) 4E-2	8E-12 - 2E-11	- 5E-14 6E-14	- 6E-8 -	- 6E-7 -
94	Plutonium-237	W, see ²³⁴ Pu Y, see ²³⁴ Pu	1E+4 -	3E+3 3E+3	1E-6 1E-6	5E-9 4E-9	2E-4 -	2E-3 -
94	Plutonium-238	W, see ²³⁴ Pu Y, see ²³⁴ Pu	9E-1 Bone surf (2E+0) -	7E-3 Bone surf (1E-2) 2E-2	3E-12 - 8E-12	- 2E-14 2E-14	- 2E-8 -	- 2E-7 -
94	Plutonium-239	W, see ²³⁴ Pu Y, see ²³⁴ Pu	8E-1 Bone surf (1E+0) -	6E-3 Bone surf (1E-2) 2E-2 Bone surf (2E-2)	3E-12 - 7E-12 -	- 2E-14 - 2E-14	- 2E-8 -	- 2E-7 -
94	Plutonium-240	W, see ²³⁴ Pu Y, see ²³⁴ Pu	8E-1 Bone surf (1E+0) -	6E-3 Bone surf (1E-2) 2E-2 Bone surf (2E-2)	3E-12 - 7E-12 -	- 2E-14 - 2E-14	- 2E-8 -	- 2E-7 -
94	Plutonium-241	W, see ²³⁴ Pu Y, see ²³⁴ Pu	4E+1 Bone surf (7E+1) -	3E-1 Bone surf (6E-1) 8E-1 Bone surf (1E+0)	1E-10 - 3E-10 -	- 8E-13 - 1E-12	- 1E-6 -	- 1E-5 -
94	Plutonium-242	W, see ²³⁴ Pu Y, see ²³⁴ Pu	8E-1 Bone surf (1E+0) -	7E-3 Bone surf (1E-2) 2E-2 Bone surf (2E-2)	3E-12 - 7E-12 -	- 2E-14 - 2E-14	- 2E-8 -	- 2E-7 -

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
		ALI μCi	DAC μCi/ml			μCi/ml		
94	Plutonium-243	W, see ²³⁴ Pu	2E+4	4E+4	2E-5	5E-8	2E-4	2E-3
		Y, see ²³⁴ Pu	-	4E+4	2E-5	5E-8	-	-
94	Plutonium-244	W, see ²³⁴ Pu	8E-1	7E-3	3E-12	-	-	-
			Bone surf (2E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
		Y, see ²³⁴ Pu	-	2E-2	7E-12	-	-	-
			Bone surf (2E-2)	-	2E-14	-	-	
94	Plutonium-245	W, see ²³⁴ Pu	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		Y, see ²³⁴ Pu	-	4E+3	2E-6	6E-9	-	-
94	Plutonium-246	W, see ²³⁴ Pu	4E+2	3E+2	1E-7	4E-10	-	-
			LLI wall (4E+2)	-	-	-	6E-6	6E-5
		Y, see ²³⁴ Pu	-	3E+2	1E-7	4E-10	-	-
95	Americium-237 ²	W, all compounds	8E+4	3E+5	1E-4	4E-7	1E-3	1E-2
95	Americium-238 ²	W, all compounds	4E+4	3E+3	1E-6	-	5E-4	5E-3
			-	Bone surf (6E+3)	-	9E-9	-	-
95	Americium-239	W, all compounds	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
95	Americium-240	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
95	Americium-241	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
95	Americium-242m	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
95	Americium-242	W, all compounds	4E+3	8E+1	4E-8	-	5E-5	5E-4
			-	Bone surf (9E+1)	-	1E-10	-	-
95	Americium-243	W, all compounds	8E-1	6E-3	3E-12	-	-	-
			Bone surf (1E+0)	Bone surf (1E-2)	-	2E-14	2E-8	2E-7
95	Americium-244m ²	W, all compounds	6E+4	4E+3	2E-6	-	-	-
			St wall (8E+4)	Bone surf (7E+3)	-	1E-8	1E-3	1E-2
95	Americium-244	W, all compounds	3E+3	2E+2	8E-8	-	4E-5	4E-4
			-	Bone surf (3E+2)	-	4E-10	-	-
95	Americium-245	W, all compounds	3E+4	8E+4	3E-5	1E-7	4E-4	4E-3
95	Americium-246m ²	W, all compounds	5E+4	2E+5	8E-5	3E-7	-	-
			St wall (6E+4)	-	-	-	8E-4	8E-3
95	Americium-246 ²	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
96	Curium-238	W, all compounds	2E+4	1E+3	5E-7	2E-9	2E-4	2E-3

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration μCi/ml
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	
			Bone surf (8E+1)	ALI μCi	DAC μCi/ml			
96	Curium-240	W, all compounds	6E+1 Bone surf (8E+1)	6E-1 Bone surf (6E-1)	2E-10 -	- 9E-13	- 1E-6	- 1E-5
96	Curium-241	W, all compounds	1E+3 -	3E+1 Bone surf (4E+1)	1E-8 -	- 5E-11	2E-5 -	2E-4 -
96	Curium-242	W, all compounds	3E+1 Bone surf (5E+1)	3E-1 Bone surf (3E-1)	1E-10 -	- 4E-13	- 7E-7	- 7E-6
96	Curium-243	W, all compounds	1E+0 Bone surf (2E+0)	9E-3 Bone surf (2E-2)	4E-12 -	- 2E-14	- 3E-8	- 3E-7
96	Curium-244	W, all compounds	1E+0 Bone surf (3E+0)	1E-2 Bone surf (2E-2)	5E-12 -	- 3E-14	- 3E-8	- 3E-7
96	Curium-245	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-246	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-247	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-248	W, all compounds	2E-1 Bone surf (4E-1)	2E-3 Bone surf (3E-3)	7E-13 -	- 4E-15	- 5E-9	- 5E-8
96	Curium-249 ²	W, all compounds	5E+4 -	2E+4 Bone surf (3E+4)	7E-6 -	- 4E-8	7E-4 -	7E-3 -
96	Curium-250	W, all compounds	4E-2 Bone surf (6E-2)	3E-4 Bone surf (5E-4)	1E-13 -	- 8E-16	- 9E-10	- 9E-9
97	Berkelium-245	W, all compounds	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
97	Berkelium-246	W, all compounds	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
97	Berkelium-247	W, all compounds	5E-1 Bone surf (1E+0)	4E-3 Bone surf (9E-3)	2E-12 -	- 1E-14	- 2E-8	- 2E-7
97	Berkelium-249	W, all compounds	2E+2 Bone surf (5E+2)	2E+0 Bone surf (4E+0)	7E-10 -	- 5E-12	- 6E-6	- 6E-5
97	Berkelium-250	W, all compounds	9E+3 -	3E+2 Bone surf (7E+2)	1E-7 -	- 1E-9	1E-4 -	1E-3 -
98	Californium-244 ²	W, all compounds except those given for Y	3E+4 St wall (3E+4)	6E+2 -	2E-7 -	8E-10 -	- 4E-4	- 4E-3
		Y, oxides and hydroxides	-	6E+2	2E-7	8E-10	-	-

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concen- tration
			ALI μCi	Inhalation		Air $\mu\text{Ci/ml}$	Water $\mu\text{Ci/ml}$	$\mu\text{Ci/ml}$
98	Californium-246	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	4E+2 -	ALI μCi 9E+0 9E+0	DAC $\mu\text{Ci/ml}$ 4E-9 4E-9	1E-11 1E-11	5E-6 -	5E-5 -
98	Californium-248	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	8E+0 Bone surf (2E+1) -	6E-2 Bone surf (1E-1) 1E-1	3E-11 - 4E-11	- 2E-13 1E-13	- 2E-7 -	- 2E-6 -
98	Californium-249	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	5E-1 Bone surf (1E+0) -	4E-3 Bone surf (9E-3) 1E-2 Bone surf (1E-2)	2E-12 - 4E-12 -	- 1E-14 -	- 2E-8 -	- 2E-7 -
98	Californium-250	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	1E+0 Bone surf (2E+0) -	9E-3 Bone surf (2E-2) 3E-2	4E-12 - 1E-11	- 3E-14 4E-14	- 3E-8 -	- 3E-7 -
98	Californium-251	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	5E-1 Bone surf (1E+0) -	4E-3 Bone surf (9E-3) 1E-2 Bone surf (1E-2)	2E-12 - 4E-12 -	- 1E-14 -	- 2E-8 -	- 2E-7 -
98	Californium-252	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	2E+0 Bone surf (5E+0) -	2E-2 Bone surf (4E-2) 3E-2	8E-12 - 1E-11	- 5E-14 5E-14	- 7E-8 -	- 7E-7 -
98	Californium-253	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	2E+2 Bone surf (4E+2) -	2E+0 - 2E+0	8E-10 - 7E-10	3E-12 - 2E-12	- 5E-6 -	- 5E-5 -
98	Californium-254	W, see ²⁴⁴ Cf Y, see ²⁴⁴ Cf	2E+0 -	2E-2 2E-2	9E-12 7E-12	3E-14 2E-14	3E-8 -	3E-7 -
99	Einsteinium-250	W, all compounds	4E+4 -	5E+2 Bone surf (1E+3)	2E-7 -	- 2E-9	6E-4 -	6E-3 -
99	Einsteinium-251	W, all compounds	7E+3 -	9E+2 Bone surf (1E+3)	4E-7 -	- 2E-9	1E-4 -	1E-3 -
99	Einsteinium-253	W, all compounds	2E+2	1E+0	6E-10	2E-12	2E-6	2E-5
99	Einsteinium-254m	W, all compounds	3E+2 LLI wall (3E+2)	1E+1 -	4E-9 -	1E-11 -	- 4E-6	- 4E-5
99	Einsteinium-254	W, all compounds	8E+0 Bone surf (2E+1)	7E-2 Bone surf (1E-1)	3E-11 -	- 2E-13	- 2E-7	- 2E-6
100	Fermium-252	W, all compounds	5E+2	1E+1	5E-9	2E-11	6E-6	6E-5
100	Fermium-253	W, all compounds	1E+3	1E+1	4E-9	1E-11	1E-5	1E-4
100	Fermium-254	W, all compounds	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4

Atomic No.	Radionuclide	Class	Table I Occupational Values			Table II Effluent Concentration		Table III Releases to Sewers
			Col. 1 Oral Ingestion	Col. 2	Col. 3	Col. 1	Col. 2	Monthly Average Concentration
			ALI μCi	Inhalation		Air μCi/ml	Water μCi/ml	μCi/ml
100	Fermium-255	W, all compounds	5E+2	ALI 2E+1	DAC 9E-9	3E-11	7E-6	7E-5
100	Fermium-257	W, all compounds	2E+1 Bone surf (4E+1)	2E-1 Bone surf (2E-1)	7E-11	- 3E-13	- 5E-7	- 5E-6
101	Mendelevium-257	W, all compounds	7E+3	8E+1 Bone surf (9E+1)	4E-8	- 1E-10	1E-4	1E-3
101	Mendelevium-258	W, all compounds	3E+1 Bone surf (5E+1)	2E-1 Bone surf (3E-1)	1E-10	- 5E-13	- 6E-7	- 6E-6
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	Submersion ¹	-	2E+2	1E-7	1E-9	-	-
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	....	-	2E-1	1E-10	1E-12	1E-8	1E-7
-	Any single radionuclide not listed above that decays by alpha emission or spontaneous fission, or any mixture for which either the identity or the concentration of any radionuclide in the mixture is not known	....	-	4E-4	2E-13	1E-15	2E-9	2E-8

FOOTNOTES:

¹"Submersion" means that values given are for submersion in a hemispherical semi-infinite cloud of airborne material.

²These radionuclides have radiological half-lives of less than 2 hours. The total effective dose equivalent received during operations with these radionuclides might include a significant contribution from external exposure. The DAC values for all radionuclides, other than those designated Class "Submersion," are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body and do NOT include potentially significant contributions to dose equivalent from external exposures. The licensee may substitute 1E-7 μCi/ml for the listed DAC to account for the submersion dose prospectively, but should use individual monitoring devices or other radiation measuring instruments that measure external exposure to demonstrate compliance with the limits. (See WAC 246-221-015(5).)

³For soluble mixtures of U-238, U-234, and U-235 in air, chemical toxicity may be the limiting factor (see WAC 246-221-010(5)). If the percent by weight (enrichment) of U-235 is not greater than 5, the concentration value for a 40-hour workweek is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour workweek shall not exceed 8E-3 (SA) μCi-hr/ml, where SA is the specific activity of the uranium inhaled. The specific activity for natural uranium is 6.77E-7 curies per gram U. The specific activity for other mixtures of U-238, U-235, and U-234, if not known, shall be:

SA = 3.6E-7 curies/gram U, U-depleted

SA = [0.4 + 0.38 (enrichment) + 0.0034 (enrichment)²] E-6, enrichment ≥ 0.72

where enrichment is the percentage by weight of U-235, expressed as percent.

NOTE:

1. If the identity of each radionuclide in a mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.
2. If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this appendix are not present in the mixture, the inhalation ALI, DAC, and effluent and sewage concentrations for the mixture are the lowest values specified in this appendix for any radionuclide that is not known to be absent from the mixture; or

If it is known that Ac-227-D and Cm-250-W are not present - 7E-4 3E-13 - -

If, in addition, it is known that Ac-227-W,Y, Th-229-W,Y, Th-230-W, Th-232-W,Y, Pa-231-W,Y, Np-237-W, Pu-239-W, Pu-240-W, Pu-242-W, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-245-W, Cm-246-W, Cm-247-W, Cm-248-W, Bk-247-W, Cf-249-W, and Cf-251-W are not present

If, in addition, it is known that Sm-146-W, Sm-147-W, Gd-148-D,W, Gd-152-D,W, Th-228-W,Y, Th-230-Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, Np-236-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-Y, Pu-240-Y, Pu-242-Y, Pu-244-W,Y, Cm-243-W, Cm-244-W, Cf-248-W, Cf-249-Y, Cf-250-W,Y, Cf-251-Y, Cf-252-W,Y, and Cf-254-W,Y are not present

If, in addition, it is known that Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-Y, Es-254-W, Fm-257-W, and Md-258-W are not present

If, in addition, it is known that Si-32-Y, Ti-44-Y, Fe-60-D, Sr-90-Y, Zr-93-D, Cd-113m-D, Cd-113-D, In-115-D,W, La-138-D, Lu-176-W, Hf-178m-D,W, Hf-182-D,W, Bi-210m-D, Ra-224-W, Ra-228-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, Pu-241-Y, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present

If it is known that Ac-227-D,W,Y, Th-229-W,Y, Th-232-W,Y, Pa-231-W,Y, Cm-248-W, and Cm-250-W are not present

If, in addition, it is known that Sm-146-W, Gd-148-D,W, Gd-152-D, Th-228-W,Y, Th-230-W,Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, U-Nat-Y, Np-236-W, Np-237-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-W,Y, Pu-240-W,Y, Pu-242-W,Y, Pu-244-W,Y, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-244-W, Cm-245-W, Cm-246-W, Cm-247-W, Bk-247-W, Cf-249-W,Y, Cf-250-W,Y, Cf-251-W,Y, Cf-252-W,Y, and Cf-254-W,Y are not present

If, in addition, it is known that Sm-147-W, Gd-152-W, Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, U-Nat-W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W, and Md-258-W are not present

If, in addition, it is known that Fe-60, Sr-90, Cd-113m, Cd-113, In-115, I-129, Cs-134, Sm-145, Sm-147, Gd-148, Gd-152, Hg-194 (organic), Bi-210m, Ra-223, Ra-224, Ra-225, Ac-225, Th-228, Th-230, U-233, U-234, U-235, U-236, U-238, U-Nat, Cm-242, Cf-248, Es-254, Fm-257, and Md-258 are not present

-	7E-3	3E-12	-	-
-	7E-2	3E-11	-	-
-	7E-1	3E-10	-	-
-	7E+0	3E-9	-	-
-	-	-	1E-14	-
-	-	-	1E-13	-
-	-	-	-	1E-12
-	-	-	-	1E-6
-	-	-	-	1E-5

- If a mixture of radionuclides consists of uranium and its daughters in ore dust (10 µm AMAD particle distribution assumed) prior to chemical separation of the uranium from the ore, the following values may be used for the DAC of the mixture: 6E-11 µCi of gross alpha activity from uranium-238, uranium-234, thorium-230, and radium-226 per milliliter of air; 3E-11 µCi of natural uranium per milliliter of air; or 45 micrograms of natural uranium per cubic meter of air.
- If the identity and concentration of each radionuclide in a mixture are known, the limiting values should be derived as follows: Determine, for each radionuclide in the mixture, the ratio between the concentration present in the mixture and the concentration otherwise established in this section for the specific radionuclide when not in a mixture. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity").
Example: If radionuclides "A," "B," and "C" are present in concentrations CA, CB, and CC, and if the applicable DACs are DAC_A, DAC_B, and DAC_C, respectively, then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_A}{DAC_A} + \frac{C_B}{DAC_B} + \frac{C_C}{DAC_C} \leq 1$$

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-221-290, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70 040, 91-02-049 (Order 121), recodified as 246-221-290, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-24-220, filed 12/8/80; Order 1095, § 402-24-220, filed 2/6/76; Order 1, § 402-24-220, filed 1/8/69; Rules (part), filed 10/26/66.]

Reviser's note: The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.

WAC 246-221-300 Appendix B—Minimum quantities of radioactive material requiring labeling.

Minimum Quantities¹ of Radioactive Material Requiring Labeling

Radionuclide	Quantity*(µCi)	Radionuclide	Quantity*(µCi)
Actinium-224	1	Americium-238	100
Actinium-225	0.01	Americium-239	1,000
Actinium-226	0.1	Americium-240	100
Actinium-227	0.001	Americium-241	0.001
Actinium-228	1	Americium-242	10
Aluminum-26	10	Americium-242m	0.001
Americium-237	1,000	Americium-243	0.001
		Americium-244	10
		Americium-244m	100
		Americium-245	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Americium-246	1,000
Americium-246m	1,000
Antimony-115	1,000
Antimony-116	1,000
Antimony-116m	1,000
Antimony-117	1,000
Antimony-118m	1,000
Antimony-119	1,000
Antimony-120 (16min)	1,000
Antimony-120 (5.76d)	100
Antimony-122	100
Antimony-124	10
Antimony-124m	1,000
Antimony-125	100
Antimony-126	100
Antimony-126m	1,000
Antimony-127	100
Antimony-128 (9.01h)	100
Antimony-128 (10.4min)	1,000
Antimony-129	100
Antimony-130	1,000
Antimony-131	1,000
Argon-39	1,000
Argon-41	1,000
Arsenic-69	1,000
Arsenic-70	1,000
Arsenic-71	100
Arsenic-72	100
Arsenic-73	100
Arsenic-74	100
Arsenic-76	100
Arsenic-77	100
Arsenic-78	1,000
Astatine-207	100
Astatine-211	10
Barium-126	1,000
Barium-128	100
Barium-131	100
Barium-131m	1,000
Barium-133	100
Barium-133m	100
Barium-135m	100
Barium-139	1,000
Barium-140	100
Barium-141	1,000
Barium-142	1,000
Berkelium-245	100
Berkelium-246	100
Berkelium-247	0.001
Berkelium-249	0.1
Berkelium-250	10
Beryllium-7	1,000
Beryllium-10	1
Bismuth-200	1,000
Bismuth-201	1,000
Bismuth-202	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Bismuth-203	100
Bismuth-205	100
Bismuth-206	100
Bismuth-207	10
Bismuth-210	1
Bismuth-210m	0.1
Bismuth-212	10
Bismuth-213	10
Bismuth-214	100
Bromine-74	1,000
Bromine-74m	1,000
Bromine-75	1,000
Bromine-76	100
Bromine-77	1,000
Bromine-80	1,000
Bromine-80m	1,000
Bromine-82	100
Bromine-83	1,000
Bromine-84	1,000
Cadmium-104	1,000
Cadmium-107	1,000
Cadmium-109	1
Cadmium-113	100
Cadmium-113m	0.1
Cadmium-115	100
Cadmium-115m	10
Cadmium-117	1,000
Cadmium-117m	1,000
Calcium-41	100
Calcium-45	100
Calcium-47	100
Californium-244	100
Californium-246	1
Californium-248	0.01
Californium-249	0.001
Californium-250	0.001
Californium-251	0.001
Californium-252	0.001
Californium-253	0.1
Californium-254	0.001
Carbon-11	1,000
Carbon-14	1,000
Cerium-134	100
Cerium-135	100
Cerium-137	1,000
Cerium-137m	100
Cerium-139	100
Cerium-141	100
Cerium-143	100
Cerium-144	1
Cesium-125	1,000
Cesium-127	1,000
Cesium-129	1,000
Cesium-130	1,000
Cesium-131	1,000
Cesium-132	100

Minimum Quantities ¹ of Radioactive Material Requiring Labeling		Minimum Quantities ¹ of Radioactive Material Requiring Labeling	
Radionuclide	Quantity*(μ Ci)	Radionuclide	Quantity*(μ Ci)
Cesium-134	10	Europium-149	100
Cesium-134m	1,000	Europium-150 (12.62h)	100
Cesium-135	100	Europium-150 (34.2y)	1
Cesium-135m	1,000	Europium-152	1
Cesium-136	10	Europium-152m	100
Cesium-137	10	Europium-154	1
Cesium-138	1,000	Europium-155	10
Chlorine-36	10	Europium-156	100
Chlorine-38	1,000	Europium-157	100
Chlorine-39	1,000	Europium-158	1,000
Chromium-48	1,000	Fermium-252	1
Chromium-49	1,000	Fermium-253	1
Chromium-51	1,000	Fermium-254	10
Cobalt-55	100	Fermium-255	1
Cobalt-56	10	Fermium-257	0.01
Cobalt-57	100	Fluorine-18	1,000
Cobalt-58	100	Francium-222	100
Cobalt-58m	1,000	Francium-223	100
Cobalt-60	1	Gadolinium-145	1,000
Cobalt-60m	1,000	Gadolinium-146	10
Cobalt-61	1,000	Gadolinium-147	100
Cobalt-62m	1,000	Gadolinium-148	0.001
Copper-60	1,000	Gadolinium-149	100
Copper-61	1,000	Gadolinium-151	10
Copper-64	1,000	Gadolinium-152	100
Copper-67	1,000	Gadolinium-153	10
Curium-238	100	Gadolinium-159	100
Curium-240	0.1	Gallium-65	1,000
Curium-241	1	Gallium-66	100
Curium-242	0.01	Gallium-67	1,000
Curium-243	0.001	Gallium-68	1,000
Curium-244	0.001	Gallium-70	1,000
Curium-245	0.001	Gallium-72	100
Curium-246	0.001	Gallium-73	1,000
Curium-247	0.001	Germanium-66	1,000
Curium-248	0.001	Germanium-67	1,000
Curium-249	1,000	Germanium-68	10
Dysprosium-155	1,000	Germanium-69	1,000
Dysprosium-157	1,000	Germanium-71	1,000
Dysprosium-159	100	Germanium-75	1,000
Dysprosium-165	1,000	Germanium-77	1,000
Dysprosium-166	100	Germanium-78	1,000
Einsteinium-250	100	Gold-193	1,000
Einsteinium-251	100	Gold-194	100
Einsteinium-253	0.1	Gold-195	10
Einsteinium-254	0.01	Gold-198	100
Einsteinium-254m	1	Gold-198m	100
Erbium-161	1,000	Gold-199	100
Erbium-165	1,000	Gold-200	1,000
Erbium-169	100	Gold-200m	100
Erbium-171	100	Gold-201	1,000
Erbium-172	100	Hafnium-170	100
Europium-145	100	Hafnium-172	1
Europium-146	100	Hafnium-173	1,000
Europium-147	100	Hafnium-175	100
Europium-148	10	Hafnium-177m	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Hafnium-178m	0.1
Hafnium-179m	10
Hafnium-180m	1,000
Hafnium-181	10
Hafnium-182	0.1
Hafnium-182m	1,000
Hafnium-183	1,000
Hafnium-184	100
Holmium-155	1,000
Holmium-157	1,000
Holmium-159	1,000
Holmium-161	1,000
Holmium-162	1,000
Holmium-162m	1,000
Holmium-164	1,000
Holmium-164m	1,000
Holmium-166	100
Holmium-166m	1
Holmium-167	1,000
Hydrogen-3	1,000
Indium-109	1,000
Indium-110 (4.9h)	1,000
Indium-110m (69.1min)	1,000
Indium-111	100
Indium-112	1,000
Indium-113m	1,000
Indium-114m	10
Indium-115	100
Indium-115m	1,000
Indium-116m	1,000
Indium-117	1,000
Indium-117m	1,000
Indium-119m	1,000
Iodine-120	100
Iodine-120m	1,000
Iodine-121	1,000
Iodine-123	100
Iodine-124	10
Iodine-125	1
Iodine-126	1
Iodine-128	1,000
Iodine-129	1
Iodine-130	10
Iodine-131	1
Iodine-132	100
Iodine-132m	100
Iodine-133	10
Iodine-134	1,000
Iodine-135	100
Iridium-182	1,000
Iridium-184	1,000
Iridium-185	1,000
Iridium-186	100
Iridium-187	1,000
Iridium-188	100
Iridium-189	100

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Iridium-190	100
Iridium-190m	1,000
Iridium-192 (73.8d)	1
Iridium-192m (1.4min)	10
Iridium-194	100
Iridium-194m	10
Iridium-195	1,000
Iridium-195m	1,000
Iron-52	100
Iron-55	100
Iron-59	10
Iron-60	1
Krypton-74	1,000
Krypton-76	1,000
Krypton-77	1,000
Krypton-79	1,000
Krypton-81	1,000
Krypton-83m	1,000
Krypton-85	1,000
Krypton-85m	1,000
Krypton-87	1,000
Krypton-88	1,000
Lanthanum-131	1,000
Lanthanum-132	100
Lanthanum-135	1,000
Lanthanum-137	10
Lanthanum-138	100
Lanthanum-140	100
Lanthanum-141	100
Lanthanum-142	1,000
Lanthanum-143	1,000
Lead-195m	1,000
Lead-198	1,000
Lead-199	1,000
Lead-200	100
Lead-201	1,000
Lead-202	10
Lead-202m	1,000
Lead-203	1,000
Lead-205	100
Lead-209	1,000
Lead-210	0.01
Lead-211	100
Lead-212	1
Lead-214	100
Lutetium-169	100
Lutetium-170	100
Lutetium-171	100
Lutetium-172	100
Lutetium-173	10
Lutetium-174	10
Lutetium-174m	10
Lutetium-176	100
Lutetium-176m	1,000
Lutetium-177	100
Lutetium-177m	10

Minimum Quantities ¹ of Radioactive Material Requiring Labeling		Minimum Quantities ¹ of Radioactive Material Requiring Labeling	
Radionuclide	Quantity*(μ Ci)	Radionuclide	Quantity*(μ Ci)
Lutetium-178	1,000	Niobium-95	100
Lutetium-178m	1,000	Niobium-95m	100
Lutetium-179	1,000	Niobium-96	100
Magnesium-28	100	Niobium-97	1,000
Manganese-51	1,000	Niobium-98	1,000
Manganese-52	100	Osmium-180	1,000
Manganese-52m	1,000	Osmium-181	1,000
Manganese-53	1,000	Osmium-182	100
Manganese-54	100	Osmium-185	100
Manganese-56	1,000	Osmium-189m	1,000
Mendelevium-257	10	Osmium-191	100
Mendelevium-258	0.01	Osmium-191m	1,000
Mercury-193	1,000	Osmium-193	100
Mercury-193m	100	Osmium-194	1
Mercury-194	1	Palladium-100	100
Mercury-195	1,000	Palladium-101	1,000
Mercury-195m	100	Palladium-103	100
Mercury-197	1,000	Palladium-107	10
Mercury-197m	100	Palladium-109	100
Mercury-199m	1,000	Phosphorus-32	10
Mercury-203	100	Phosphorus-33	100
Molybdenum-90	100	Platinum-186	1,000
Molybdenum-93	10	Platinum-188	100
Molybdenum-93m	100	Platinum-189	1,000
Molybdenum-99	100	Platinum-191	100
Molybdenum-101	1,000	Platinum-193	1,000
Neodymium-136	1,000	Platinum-193m	100
Neodymium-138	100	Platinum-195m	100
Neodymium-139	1,000	Platinum-197	100
Neodymium-139m	1,000	Platinum-197m	1,000
Neodymium-141	1,000	Platinum-199	1,000
Neodymium-147	100	Platinum-200	100
Neodymium-149	1,000	Plutonium-234	10
Neodymium-151	1,000	Plutonium-235	1,000
Neptunium-232	100	Plutonium-236	0.001
Neptunium-233	1,000	Plutonium-237	100
Neptunium-234	100	Plutonium-238	0.001
Neptunium-235	100	Plutonium-239	0.001
Neptunium-236 (1.15E+5y)	0.001	Plutonium-240	0.001
Neptunium-236 (22.5h)	1	Plutonium-241	0.01
Neptunium-237	0.001	Plutonium-242	0.001
Neptunium-238	10	Plutonium-243	1,000
Neptunium-239	100	Plutonium-244	0.001
Neptunium-240	1,000	Plutonium-245	100
Nickel-56	100	Polonium-203	1,000
Nickel-57	100	Polonium-205	1,000
Nickel-59	100	Polonium-207	1,000
Nickel-63	100	Polonium-210	0.1
Nickel-65	1,000	Potassium-40	100
Nickel-66	10	Potassium-42	1,000
Niobium-88	1,000	Potassium-43	1,000
Niobium-89 (122min)	1,000	Potassium-44	1,000
Niobium-89m (66min)	1,000	Potassium-45	1,000
Niobium-90	100	Praseodymium-136	1,000
Niobium-93m	10	Praseodymium-137	1,000
Niobium-94	1	Praseodymium-138m	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Praseodymium-139	1,000
Praseodymium-142	100
Praseodymium-142m	1,000
Praseodymium-143	100
Praseodymium-144	1,000
Praseodymium-145	100
Praseodymium-147	1,000
Promethium-141	1,000
Promethium-143	100
Promethium-144	10
Promethium-145	10
Promethium-146	1
Promethium-147	10
Promethium-148	10
Promethium-148m	10
Promethium-149	100
Promethium-150	1,000
Promethium-151	100
Protactinium-227	10
Protactinium-228	1
Protactinium-230	0.1
Protactinium-231	0.001
Protactinium-232	1
Protactinium-233	100
Protactinium-234	100
Radium-223	0.1
Radium-224	0.1
Radium-225	0.1
Radium-226	0.1
Radium-227	1,000
Radium-228	0.1
Radon-220	1
Radon-222	1
Rhenium-177	1,000
Rhenium-178	1,000
Rhenium-181	1,000
Rhenium-182 (64.0h)	100
Rhenium-182 (12.7h)	1,000
Rhenium-184	100
Rhenium-184m	10
Rhenium-186	100
Rhenium-186m	10
Rhenium-187	1,000
Rhenium-188	100
Rhenium-188m	1,000
Rhenium-189	100
Rhodium-99	100
Rhodium-99m	1,000
Rhodium-100	100
Rhodium-101	10
Rhodium-101m	1,000
Rhodium-102	10
Rhodium-102m	10
Rhodium-103m	1,000
Rhodium-105	100
Rhodium-106m	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Rhodium-107	1,000
Rubidium-79	1,000
Rubidium-81	1,000
Rubidium-81m	1,000
Rubidium-82m	1,000
Rubidium-83	100
Rubidium-84	100
Rubidium-86	100
Rubidium-87	100
Rubidium-88	1,000
Rubidium-89	1,000
Ruthenium-94	1,000
Ruthenium-97	1,000
Ruthenium-103	100
Ruthenium-105	1,000
Ruthenium-106	1
Samarium-141	1,000
Samarium-141m	1,000
Samarium-142	1,000
Samarium-145	100
Samarium-146	1
Samarium-147	100
Samarium-151	10
Samarium-153	100
Samarium-155	1,000
Samarium-156	1,000
Scandium-43	1,000
Scandium-44	100
Scandium-44m	100
Scandium-46	10
Scandium-47	100
Scandium-48	100
Scandium-49	1,000
Selenium-70	1,000
Selenium-73	100
Selenium-73m	1,000
Selenium-75	100
Selenium-79	100
Selenium-81	1,000
Selenium-81m	1,000
Selenium-83	1,000
Silicon-31	1,000
Silicon-32	1
Silver-102	1,000
Silver-103	1,000
Silver-104	1,000
Silver-104m	1,000
Silver-105	100
Silver-106	1,000
Silver-106m	100
Silver-108m	1
Silver-111	100
Silver-112	100
Silver-115	1,000
Silver-110m	10
Sodium-22	10

Minimum Quantities ¹ of Radioactive Material Requiring Labeling		Minimum Quantities ¹ of Radioactive Material Requiring Labeling	
Radionuclide	Quantity*(μ Ci)	Radionuclide	Quantity*(μ Ci)
Sodium-24	100	Tellurium-134	1,000
Strontium-80	100	Terbium-147	1,000
Strontium-81	1,000	Terbium-149	100
Strontium-83	100	Terbium-150	1,000
Strontium-85	100	Terbium-151	100
Strontium-85m	1,000	Terbium-153	1,000
Strontium-87m	1,000	Terbium-154	100
Strontium-89	10	Terbium-155	1,000
Strontium-90	0.1	Terbium-156	100
Strontium-91	100	Terbium-156m (24.4h)	1,000
Strontium-92	100	Terbium-156m (5.0h)	1,000
Sulfur-35	100	Terbium-157	10
Tantalum-172	1,000	Terbium-158	1
Tantalum-173	1,000	Terbium-160	10
Tantalum-174	1,000	Terbium-161	100
Tantalum-175	1,000	Thallium-194	1,000
Tantalum-176	100	Thallium-194m	1,000
Tantalum-177	1,000	Thallium-195	1,000
Tantalum-178	1,000	Thallium-197	1,000
Tantalum-179	100	Thallium-198	1,000
Tantalum-180	100	Thallium-198m	1,000
Tantalum-180m	1,000	Thallium-199	1,000
Tantalum-182	10	Thallium-200	1,000
Tantalum-182m	1,000	Thallium-201	1,000
Tantalum-183	100	Thallium-202	100
Tantalum-184	100	Thallium-204	100
Tantalum-185	1,000	Thorium-226	10
Tantalum-186	1,000	Thorium-227	0.01
Technetium-93	1,000	Thorium-228	0.001
Technetium-93m	1,000	Thorium-229	0.001
Technetium-94	1,000	Thorium-230	0.001
Technetium-94m	1,000	Thorium-231	100
Technetium-96	100	Thorium-232	100
Technetium-96m	1,000	Thorium-234	10
Technetium-97	1,000	Thorium-natural	100
Technetium-97m	100	Thulium-162	1,000
Technetium-98	10	Thulium-166	100
Technetium-99	100	Thulium-167	100
Technetium-99m	1,000	Thulium-170	10
Technetium-101	1,000	Thulium-171	10
Technetium-104	1,000	Thulium-172	100
Tellurium-116	1,000	Thulium-173	100
Tellurium-121	100	Thulium-175	1,000
Tellurium-121m	10	Tin-110	100
Tellurium-123	100	Tin-111	1,000
Tellurium-123m	10	Tin-113	100
Tellurium-125m	10	Tin-117m	100
Tellurium-127	1,000	Tin-119m	100
Tellurium-127m	10	Tin-121	1,000
Tellurium-129	1,000	Tin-121m	100
Tellurium-129m	10	Tin-123	10
Tellurium-131	100	Tin-123m	1,000
Tellurium-131m	10	Tin-125	10
Tellurium-132	10	Tin-126	10
Tellurium-133	1,000	Tin-127	1,000
Tellurium-133m	100	Tin-128	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Titanium-44	1
Titanium-45	1,000
Tungsten-176	1,000
Tungsten-177	1,000
Tungsten-178	1,000
Tungsten-179	1,000
Tungsten-181	1,000
Tungsten-185	100
Tungsten-187	100
Tungsten-188	10
Uranium-230	0.01
Uranium-231	100
Uranium-232	0.001
Uranium-233	0.001
Uranium-234	0.001
Uranium-235	0.001
Uranium-236	0.001
Uranium-237	100
Uranium-238	100
Uranium-239	1,000
Uranium-240	100
Uranium-natural	100
Vanadium-47	1,000
Vanadium-48	100
Vanadium-49	1,000
Xenon-120	1,000
Xenon-121	1,000
Xenon-122	1,000
Xenon-123	1,000
Xenon-125	1,000
Xenon-127	1,000
Xenon-129m	1,000
Xenon-131m	1,000
Xenon-133	1,000
Xenon-133m	1,000
Xenon-135	1,000
Xenon-135m	1,000
Xenon-138	1,000
Ytterbium-162	1,000
Ytterbium-166	100
Ytterbium-167	1,000
Ytterbium-169	100
Ytterbium-175	100
Ytterbium-177	1,000
Ytterbium-178	1,000
Yttrium-86	100
Yttrium-86m	1,000
Yttrium-87	100
Yttrium-88	10
Yttrium-90	10
Yttrium-90m	1,000
Yttrium-91	10
Yttrium-91m	1,000
Yttrium-92	100
Yttrium-93	100
Yttrium-94	1,000

Minimum Quantities¹ of Radioactive
Material Requiring Labeling

Radionuclide	Quantity*(μ Ci)
Yttrium-95	1,000
Zinc-62	100
Zinc-63	1,000
Zinc-65	10
Zinc-69	1,000
Zinc-69m	100
Zinc-71m	1,000
Zinc-72	100
Zirconium-86	100
Zirconium-88	10
Zirconium-89	100
Zirconium-93	1
Zirconium-95	10
Zirconium-97	100

Any alpha-emitting radionuclide not listed above or mixtures of alpha-emitters of unknown composition 0.001 Any radionuclide other than alpha-emitting radionuclides not listed above, or mixtures of beta emitters of unknown composition 0.01

Note: For purposes of WAC 246-221-120(8), 246-221-130 (7)(a), and 246-221-240(1) where there is involved a combination of radionuclides in known amounts, the limit for the combination shall be derived as follows: Determine, for each radionuclide in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific radionuclide when not in combination. The sum of such ratios for all radionuclides in the combination may not exceed "1" — that is, unity.

¹ The quantities listed above were derived by taking 1/10th of the most restrictive ALI listed in Table I, Columns 1 and 2, of WAC 246-221-290, rounding to the nearest factor of 10, and constraining the values listed between 37 Bq and 37 MBq (0.001 and 1,000 μ Ci). Values of 3.7 MBq (100 μ Ci) have been assigned for radionuclides having a radioactive half-life in excess of E+9 years, except rhenium, 37 MBq (1,000 μ Ci), to take into account their low specific activity.

* To convert μ Ci to kBq, multiply the μ Ci value by 37.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-221-300, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-221-300, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-221-300, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-24-230, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-24-230, filed 12/8/80; Order 1095, § 402-24-230, filed 2/6/76; Order 708, § 402-24-230, filed 8/24/72; Order 1, § 402-24-230, filed 7/27/71; Order 1, § 402-24-230, filed 1/8/69; Rules (part), filed 10/26/66.]

Chapter 246-222 WAC

RADIATION PROTECTION—WORKER RIGHTS

WAC

246-222-001	Purpose and scope.
246-222-020	Posting of notices to workers.
246-222-030	Instructions to workers.
246-222-040	Notifications and reports to individuals.
246-222-050	Presence of representatives of licensees or registrants and workers during inspection.
246-222-060	Consultation with workers during inspections.
246-222-070	Requests by workers for inspections.
246-222-080	Inspections not warranted—Informal review.

WAC 246-222-001 Purpose and scope. This chapter establishes requirements for notices, instructions and reports by licensees or registrants to individuals engaged in work under a license or registration and options available to such individuals in connection with department inspections of licensees or registrants to ascertain compliance with the provisions of the act and regulations, orders and licenses issued thereunder regarding radiological working conditions. The regulations in this chapter apply to all persons who receive, possess, use, own or transfer a source of radiation licensed by or registered with the department pursuant to the regulations in chapters 246-224, 246-232, and 246-235 WAC. The definitions contained in WAC 246-220-010 also apply to this chapter.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-010, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-48-010, filed 12/8/80; Order 1084, § 402-48-010, filed 1/14/76.]

WAC 246-222-020 Posting of notices to workers. (1) Each licensee or registrant shall post current copies of the following documents:

(a) The regulations in this chapter and in chapter 246-221 WAC;

(b) The license, conditions or documents incorporated into the license by reference and amendments thereto;

(c) The operating procedures applicable to work under the license or registration;

(d) Any notice of noncompliance involving radiological working conditions, proposed imposition of civil penalty, order issued pursuant to chapter 246-220 WAC, or any response from the licensee or registrant.

(2) If posting of a document specified in subsection (1)(a), (b), or (c) of this section is not practicable, the licensee or registrant may post a notice which describes the document and states where it may be examined.

(3) Each licensee or registrant shall conspicuously post pertinent emergency procedures when emergency procedures are required by the department.

(4) Properly completed department Form RHF-3 "Notice to employees," shall be posted by each licensee or registrant wherever individuals work in or frequent any portion of a restricted area.

(5) Documents, notices or forms posted pursuant to this section shall appear in a sufficient number of places to permit individuals engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered.

(6) Department documents posted pursuant to subsection (1)(d) of this section shall be posted as specified by subsection (5) of this section within five working days after receipt of the documents from the department; the licensee's or registrant's response, if any, shall be posted within five working days after dispatch from the licensee or registrant. Such documents shall remain posted for a minimum of five working days or until action correcting the item(s) of noncompliance has been completed, whichever is later.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-222-020, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-020, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-48-020, filed 12/8/80; Order 1084, § 402-48-020, filed 1/14/76.]

WAC 246-222-030 Instructions to workers. (1) All individuals likely to receive in a year an occupational dose in excess of 1 mSv (100 mrem):

(a) Shall be kept informed of the storage, transfer, or use of sources of radiation in the licensee's or registrant's facility;

(b) Shall be instructed in the health protection considerations for the individual and potential offspring associated with exposure to radiation or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed;

(c) Shall be instructed in, and instructed to observe, to the extent within the worker's control, the applicable provisions of these regulations, department form RHF-3 "Notice to employees," and license conditions for the protection of personnel from exposures to radiation or radioactive material;

(d) Shall be instructed that any worker or representative of workers who believes that a violation of the regulations, license conditions, or unnecessary exposure to radiation exists or occurred, may request an inspection by the department by oral or written notification. The notification shall set forth specific grounds for the complaint. Any such notification to the department is confidential;

(e) Shall be instructed of their right to notify the department if the individual suspects improper actions by a licensee/registrant, or conditions which may lead to a violation of these regulations, the license/registration, or unnecessary exposure to radiation or radioactive materials;

(f) Shall be instructed that employment discrimination by a licensee/registrant against an employee because of actions described in this chapter is prohibited;

(g) Shall be instructed as to their responsibility to report promptly to the licensee or registrant any condition which may constitute, lead to, or cause a violation of the act, these regulations, and licenses or unnecessary exposure to radiation or radioactive material;

(h) Shall be instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive material; and

(i) Shall be advised as to the radiation exposure reports which workers shall be furnished pursuant to WAC 246-222-040.

(2) Records of these instructions described in subsection (1) of this section for all individuals working in, or frequenting any portion of, a restricted area shall be maintained for inspection by the department until further notice. These records shall include a copy of this section, or all the information contained in this section, along with a dated verification signature by the employee stating that the individual has received an explanation of the instructions contained in this section.

(3) In determining those individuals subject to the requirements of subsection (1) of this section, licensees and registrants shall take into consideration assigned activities during normal and abnormal situations involving exposure to sources of radiation which can reasonably be expected to occur during the life of a licensed or registered facility. The extent of these instructions shall be commensurate with potential radiological health protection considerations present in the workplace.

[Statutory Authority: RCW 70.98.050, 99-05-012, § 246-222-030, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-222-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-222-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-222-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-48-030, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-48-030, filed 12/8/80; Order 1084, § 402-48-030, filed 1/14/76.]

WAC 246-222-040 Notifications and reports to individuals. (1) Radiation exposure data for an individual and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual shall be reported to the individual as specified in this section. The information reported shall include data and results obtained pursuant to these regulations, orders, and license conditions, as shown in records maintained by the licensee or registrant pursuant to these regulations. Each notification and report shall:

- (a) Be in writing;
- (b) Include appropriate identifying data such as the name of the licensee or registrant, the name of the individual, and the individual's identification number, preferably Social Security number;
- (c) Include the individual's exposure information; and
- (d) Contain the following statement:

"This report is furnished to you under the provisions of the Washington state department of health, division of radiation protection, rules and regulations for radiation protection. You should preserve this report for further reference."

(2) Each licensee or registrant shall advise each worker annually of the worker's dose as shown in records maintained by the licensee or registrant pursuant to WAC 246-221-090, 246-221-100, and 246-221-230.

(3) At the request of a worker formerly engaged in work controlled by the licensee or the registrant, each licensee or registrant shall furnish to each worker or former worker a report of the worker's dose due to exposure to radiation or radioactive material upon termination. For the purposes of this section, termination means the end of employment with the licensee or the end of a work assignment in the licensee's restricted area(s) in a given calendar quarter without expectation, or specific scheduling, of reentry into such restricted area(s) during the remainder of that calendar quarter. Such report shall be furnished within thirty days from the time the request is made, or within thirty days after the exposure of the individual has been determined by the licensee or registrant, whichever is later; shall cover, within the period of time specified in the request, the dose record for each year in which the

worker's activities involved exposure to radiation from radioactive material licensed by, or radiation machines registered with the department; and shall include the dates and locations of work under the license or registration in which the worker participated during this period.

(4) In addition to the requirements of subsection (3) of this section, at the request of a worker who is terminating employment with the licensee or registrant in work involving radiation exposure, during the current year, each licensee or registrant shall provide at termination to each such worker, or to the worker's designee a written report regarding the radiation dose received by that worker from operations of the licensee or registrant during the current year. If the most recent individual monitoring results are not available at that time, a written estimate of the dose shall be provided together with a clear indication that this is an estimate.

(5) When a licensee or registrant is required pursuant to WAC 246-221-260 to report to the department any exposure of an individual to radiation or radioactive material, the licensee or the registrant shall also provide the individual a written report on the individual's exposure data included therein. Such reports shall be transmitted at a time not later than the transmittal to the department.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-222-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-222-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-222-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-48-040, filed 12/11/86; 83-19-050 (Order 2026), § 402-48-040, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-48-040, filed 12/8/80; Order 1084, § 402-48-040, filed 1/14/76.]

WAC 246-222-050 Presence of representatives of licensees or registrants and workers during inspection. (1) Each licensee or registrant shall afford to the department at all reasonable times opportunity to inspect materials, machines, activities, facilities, premises, and records pursuant to these regulations.

(2) During an inspection, department inspectors may consult privately with workers as specified in WAC 246-222-060. The licensee or registrant may accompany department inspectors during other phases of an inspection.

(3) If, at the time of inspection, an individual has been authorized by the workers to represent them during department inspections, the licensee or registrant shall notify the inspectors of such authorization and shall give the workers' representative an opportunity to accompany the inspectors during the inspection of physical working conditions.

(4) Each workers' representative shall be routinely engaged in work under control of the licensee or registrant and shall have received instructions as specified in WAC 246-222-030.

(5) Different representatives of licensees or registrants and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection. However, only one workers' representative at a time may accompany the inspectors.

(6) With the approval of the licensee or registrant and the workers' representative an individual who is not routinely engaged in work under control of the licensee or registrant,

for example, a consultant to the licensee or registrant or to the workers' representative, shall be afforded the opportunity to accompany department inspectors during the inspection of physical working conditions.

(7) Notwithstanding the other provisions of this section, department inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee or registrant to enter that area.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-050, filed 12/27/90, effective 1/31/91; Order 1084, § 402-48-050, filed 1/14/76.]

WAC 246-222-060 Consultation with workers during inspections. (1) Department inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of department regulations and licenses to the extent the inspectors deem necessary for the conduct of an effective and thorough inspection.

(2) During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which the worker has reason to believe may have contributed to or caused any violation of the act, these regulations, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material or a registered radiation machine under the licensee's or registrant's control. Any such notice in writing shall comply with the requirements of WAC 246-222-070(1).

(3) The provisions of subsection (2) of this section shall not be interpreted as authorization to disregard instructions pursuant to WAC 246-222-030.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-060, filed 12/27/90, effective 1/31/91; Order 1084, § 402-48-060, filed 1/14/76.]

WAC 246-222-070 Requests by workers for inspections. (1) Any worker or representative of workers who believes that a violation of the act, of these regulations, or of license conditions exists or has occurred in work under a license or registration with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Washington state department of health, division of radiation protection. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of the workers. A copy shall be provided to the licensee or registrant by the office of radiation protection no later than at the time of inspection except that, upon the request of the worker giving such notice, his or her name and the name of individuals referred to therein shall not appear in such copy or on any record published, released, or made available by the department, except for good cause shown.

[Title 246 WAC—p. 286]

(2) If, upon receipt of such notice, the inspector for the division of radiation protection determines that the complaint meets the requirements set forth in subsection (1) of this section, and that there are reasonable grounds to believe that the alleged violation exists or has occurred, the inspector shall cause an inspection to be made as soon as practicable, to determine if such alleged violation exists or has occurred. Inspections pursuant to this section need not be limited to matters referred to in the complaint.

(3) No licensee or registrant shall discharge or in any manner discriminate against any worker because such worker has filed any complaint or instituted or caused to be instituted any proceeding under these regulations or has testified or is about to testify in any such proceeding or because of the exercise by such worker on behalf of the worker or other workers of any option afforded by this chapter.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-222-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-222-070, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-222-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-48-070, filed 12/11/86; Order 1084, § 402-48-070, filed 1/14/76.]

WAC 246-222-080 Inspections not warranted—Informal review. (1) If the department of health, division of radiation protection determines, with respect to a complaint under WAC 246-222-070 that an inspection is not warranted because there are no reasonable grounds to believe that a violation exists or has occurred, the division of radiation protection shall notify the complainant in writing of such determination.

(a) If the complaint resulted from activities concerning naturally occurring or accelerator produced radioactive materials and/or radiation producing machines: The complainant may obtain review of such determination by submitting a written statement of position to the Assistant Director, Division of Industrial Safety and Health, P.O. Box 4600, Olympia, Washington 98504-4600. Such request for informal review will be processed according to the provisions of WAC 296-350-460 and the provisions of the interagency agreement between the department of labor and industries and the department of health, division of radiation protection, if any.

(b) If the complaint resulted from activities concerning byproduct material, source material, and/or special nuclear material: The complainant may obtain review of such determination by submitting a written statement of position with the Department of Health, Division of Radiation Protection, P.O. Box 47827, Olympia, Washington 98504-7827 (360 236-3300), who will provide the licensee or registrant with a copy of such statement by certified mail, excluding, at the request of the complainant, the name of the complainant. The licensee or registrant may submit an opposing written statement of position with the department of health, division of radiation protection, who will provide the complainant with a copy of such statement by certified mail. Upon the request of the complainant, the department of health may hold an informal conference in which the complainant and the licensee or registrant may orally present their views. An informal conference may also be held at the request of the licensee or registrant, but disclosure of the identity of the complainant will be

(2003 Ed.)

made only following receipt of written authorization from the complainant. After considering all written or oral views presented, the department of health shall affirm, modify, or reverse the determination of the division of radiation protection and furnish the complainant and the licensee or registrant a written notification of the decision and the reason therefor.

(2) If the division of radiation protection determines that an inspection is not warranted because the requirements of WAC 246-222-070(1) have not been met, it shall notify the complainant in writing of such determination. Such determination shall be without prejudice to the filing of a new complaint meeting the requirements of WAC 246-222-070(1).

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-222-080, filed 6/8/98, effective 7/9/98; 94-01-073, § 246-222-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-222-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-222-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-48-080, filed 12/11/86; Order 1084, § 402-48-080, filed 1/14/76.]

Chapter 246-224 WAC

RADIATION PROTECTION—RADIATION MACHINE ASSEMBLY AND REGISTRATION

WAC

246-224-0001	Purpose.
246-224-0010	Definitions.
246-224-0020	Who must register a radiation machine?
246-224-0030	Are there any radiation machines within Washington state that do not have to be registered?
246-224-0040	What if we have separate locations with radiation machines?
246-224-0050	When and how do I register?
246-224-0060	Are there other requirements besides registration?
246-224-0070	When and how do I report changes to my registration?
246-224-0080	When and how do I renew my registration?
246-224-0090	What are my obligations if I close my facility or get rid of a machine?
246-224-0100	What are the responsibilities of the x-ray agent?
246-224-0110	What if I want to bring a radiation machine into Washington state for temporary use from out-of-state?
246-224-0120	What happens if I do not register my radiation machine?

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-224-001	Purpose and scope. [Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-001, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-210, filed 12/8/80; Order 1084, § 402-16-210, filed 1/14/76. Formerly WAC 402-16-010.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-010	Exemptions. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-010, filed 12/27/90, effective 1/31/91; Order 1084, § 402-16-220, filed 1/14/76. Formerly WAC 402-16-100.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-020	Application for registration of radiation machine facilities. [Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-020, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-230, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-230, filed 12/8/80; Order 1084, § 402-16-230, filed 1/14/76. Formerly WAC 402-16-020 and 402-16-040.] Repealed by

246-224-030	02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080. Issuance of certificate of registration. [Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-232, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-232, filed 12/8/80.] Repealed by 94-01-073, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050.
246-224-040	Expiration of registration. [Statutory Authority: RCW 70.98.050, 94-01-073, § 246-224-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-040, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-234, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-234, filed 12/8/80.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-224-050	Renewal of registration. [Statutory Authority: RCW 70.98.050, 94-01-073, § 246-224-050, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-238, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-238, filed 12/8/80.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-060	Separate locations. [Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-060, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-240, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-240, filed 12/8/80; Order 1084, § 402-16-240, filed 1/14/76. Formerly WAC 402-16-050.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-070	Report of changes. [Statutory Authority: RCW 70.98.050, 94-01-073, § 246-224-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-070, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-250, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-250, filed 12/8/80; Order 1084, § 402-16-250, filed 1/14/76. Formerly WAC 402-16-060.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-224-080	Approval not implied. [Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-080, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-080, filed 12/27/90, effective 1/31/91; Order 1084, § 402-16-260, filed 1/14/76. Formerly WAC 402-16-070.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-224-090	Repair person, assembler, or installer obligation. [Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-224-090, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-224-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-16-270, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-16-270, filed 12/8/80; Order 1084, § 402-16-270, filed 1/14/76. Formerly WAC 402-

16-090.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.

246-224-100

Out-of-state radiation machines. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-224-100, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-224-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-16-280, filed 12/8/80; Order 1084, § 402-16-280, filed 1/14/76. Formerly WAC 402-16-110.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.

WAC 246-224-0001 Purpose. The purpose of this chapter is to regulate sources of ionizing radiation as required by RCW 70.98.050 and 70.98.080. This chapter provides for the registration of all radiation machines installed, manufactured, tested, used, or located in Washington state.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0001, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0010 Definitions. "Agent" means a person, company, or dealer; which assembles, installs, repairs, sells, or leases x-ray machines.

"Department" means the department of health.

"Facility" means the location at which one or more radiation machines are installed, manufactured, tested, or used within one building, vehicle, or in one physical complex.

"FDA" means the United States Food and Drug Administration.

"Radiation" means, for the purposes of this chapter, ionizing radiation, including x-ray, electron beam, and other machine produced particulate radiation.

"Radiation machine" means, for purposes of this chapter, a device that, when operated, produces x-ray or electron radiation, in a prescribed manner, with defined characteristics, techniques, or parameters. It does not include devices with radioactive material as the only source of radiation.

"Registrant" means the owner or controller of the radiation machine who is responsible for the safe operation of the radiation machine.

"Registration" means providing required information and continuing contact with the department.

"Storage" means the status of a radiation machine that is approved by the department as being unable to produce radiation without substantial effort at set-up, reassembly, or reinstallation. For facilities with a radiation control authority, (e.g., radiation safety office) a locking or disabling procedure may serve to provide this status.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0010, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0020 Who must register a radiation machine? Any x-ray facility within Washington state must register with the department.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0020, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0030 Are there any radiation machines within Washington state that do not have to be registered? Machines do not need to be registered when:

[Title 246 WAC—p. 288]

(1) Electronic equipment (including television receivers) produces incidental x rays provided that the dose equivalent rate does not exceed 5 μ Sv/hr (0.5 mrem/hr) at 5 cm from any accessible equipment surface averaged over an area of 10 square centimeters;

(2) Radiation machines are in transit;

(3) Radiation machines are held for sale or lease by x-ray agents; or

(4) The department allows an exemption.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0030, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0040 What if we have separate locations with radiation machines? (1) Geographically separate facilities must register separately even if these separate facilities are under one administrative control (e.g., several satellite clinics operated by one health care institution).

(2) Each facility must designate a contact person.

(3) If machines are routinely moved between or among separate facilities, indicate this when registering.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0040, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0050 When and how do I register? (1) You must register with the department within fifteen calendar days of initial use. You may also register anytime before initial use.

(2) Registration is valid for one year from the department approval date.

(3) You must provide, at a minimum, the:

(a) Owner name;

(b) Profession and credential of user/registrator;

(c) Official contact person;

(d) Site address and phone number;

(e) Mailing address and phone number (if different from facility);

(f) Total number and type of radiation machines (tubes) at the facility;

(g) Installation date(s);

(h) Seller/installer name; and

(i) Name of former agent and address of former facility from which the machines were transferred or sold.

(4) Pay applicable registration fees according to WAC 246-254-053, Radiation machine facility registration fees.

(5) Submit registration information and applicable fees to:

Department of Health
Revenue Section
P.O. Box 1099
Olympia, WA 98507-1099
360-236-3230 or 1-800-299-XRAY

Note: For division of radiation protection information, visit the following website:
<http://www.doh.wa.gov/ehp/rp/Default.htm>.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0050, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0060 Are there other requirements besides registration? All registrants must:

(1) Follow applicable standards according to chapter 246-225 WAC, Radiation protection—X-rays in the healing arts; chapter 246-227 WAC, Radiation protection—Industrial x-ray; chapter 246-228 WAC, Radiation protection—Analytical x-ray equipment; and chapter 246-229 WAC, Radiation protection—Particle accelerators;

(2) Meet general radiation protection rules and standards according to chapter 246-220 WAC, Radiation protection—General provisions; chapter 246-221 WAC, Radiation protection standards; chapter 246-222 WAC, Radiation protection—Worker rights; and

(3) Pay applicable fees for radiation machine use according to WAC 246-254-053, Radiation machine facility registration fees.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0060, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0070 When and how do I report changes to my registration? (1) You must notify the department within thirty days of any change to your registration information.

(2) Submit registration changes to:

Department of Health
X-Ray Control Section
P.O. Box 47827

Olympia, WA 98504-7827

360-236-3230 or 1-800-299-XXRAY

(3) You may notify the department of changes on the registration renewal notice if timely.

Note: For division of radiation protection information, visit the following website:
<http://www.doh.wa.gov/ehp/rp/Default.htm>.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0070, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0080 When and how do I renew my registration? (1) You must renew your registration annually.

(2) You must submit renewal information and the applicable registration fee as specified in WAC 246-254-053 at least thirty calendar days prior to your registration expiration date. The department provides notice of fees and current registration information ninety days prior to the registration expiration date, and anytime upon request.

(3) If registration is overdue, late fees apply according to WAC 246-254-053, Radiation machine facility registration fees.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0080, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0090 What are my obligations if I close my facility or get rid of a machine? (1) You must notify the department of the machine status within thirty days of closure or removal.

(2) If the machine is disposed of or transferred within Washington state, you must provide:

- (a) The name and contact information of the recipient;
- (b) The address of the recipient; and
- (c) The date of the disposal or transfer.

(3) If the machine is to be placed in storage and retained, contact the department for approval.

(2003 Ed.)

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0090, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0100 What are the responsibilities of the x-ray agent? (1) Within fifteen calendar days, any agent who sells, leases, transfers, lends, disposes of, assembles, repairs, replaces, or installs radiation machines or components in Washington state must notify the department of the:

- (a) Recipient's name and facility address;
- (b) Manufacturer, model, and serial number of each radiation machine master control; and
- (c) Date of transfer of the radiation machine.

Note: An FDA form 2579 or equivalent may be used for this notification requirement.

(2) Any agent who installs x-ray systems, controls, or components must ensure that machines, accessories, or components (including exposure switch placement) meet the applicable requirements of chapter 246-225 WAC, Radiation protection—X-rays in the healing arts; chapter 246-227 WAC, Radiation protection—Industrial x-ray; chapter 246-228 WAC, Radiation protection—Analytical x-ray equipment; and chapter 246-229 WAC, Radiation protection—Particle accelerators.

(3) Agents shall not install or transfer a radiation machine if the registrant does not complete:

(a) A required plan review according to chapter 246-225 WAC, Radiation protection—X-rays in the healing arts or chapter 246-227 WAC, Radiation protection—Industrial radiography; or

(b) Shielding and/or required design construction.

(4) Agents must assemble certified x-ray systems according to 21 CFR, subchapter J so that manufacturer's specifications and intended performance designs are met.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0100, filed 6/27/02, effective 7/28/02.]

WAC 246-224-0110 What if I want to bring a radiation machine into Washington state for temporary use from out-of-state? (1) Notify the department at least three business days prior to in-state use when bringing an x-ray machine into the state for any temporary use. The department may waive the time requirement upon hardship request by the owner. Notification to the department includes, at a minimum, the:

- (a) Type of radiation machine;
- (b) Nature, duration, and scope of use; and
- (c) Exact location where the radiation machine is to be used.

(2) All machines and assemblies must comply with all applicable regulations.

(3) Any medical or dental use radiation (e.g., x-ray) machines within the state must register with the department according to WAC 246-224-0020.

(4) For radiation (e.g., x-ray) machines not intended for patient diagnosis and treatment, you must register the machine if it is used for more than sixty calendar days. Registration is waived for sixty or fewer calendar days per year.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0110, filed 6/27/02, effective 7/28/02.]

[Title 246 WAC—p. 289]

WAC 246-224-0120 What happens if I do not register my radiation machine? You must pay a late fee plus registration fees due for the period of time the machine has been in operation and not registered according to WAC 246-254-053, Radiation machine facility registration fees.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-224-0120, filed 6/27/02, effective 7/28/02.]

Chapter 246-225 WAC

RADIATION PROTECTION—X-RAYS IN THE HEALING ARTS

WAC

246-225-001	Purpose and scope.
246-225-010	Definitions.
246-225-020	General requirements—Administrative controls.
246-225-030	General requirements—Plan review.
246-225-040	General requirements for diagnostic x-ray systems.
246-225-050	Fluoroscopic x-ray systems.
246-225-060	Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Beam limitation.
246-225-070	Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Radiation exposure control devices.
246-225-080	Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Source-to-skin or receptor distance.
246-225-090	Radiographic systems other than fluoroscopic and dental intraoral—Exposure reproducibility.
246-225-100	Radiographic systems—Standby radiation from capacitor energy storage equipment.
246-225-110	Intraoral dental radiographic systems.
246-225-120	Therapeutic x-ray installations less than 1 MeV.
246-225-130	X-ray and electron therapy systems with energies of one MeV and above.
246-225-140	Veterinary medicine radiographic installations.
246-225-150	X-ray film developing requirements.
246-225-160	Mammography.
246-225-99920	Appendix II—Determination of competency.
246-225-99930	Appendix III—Information to be submitted by persons proposing to conduct healing arts screening using ionizing radiation.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-225-99910	Appendix I—Good practices. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-99910, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-99910, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-99910, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-99001, filed 9/16/83; Order 1084, Appendix D (codified as WAC 402-28-99001), filed 1/14/76.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
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WAC 246-225-001 Purpose and scope. This chapter establishes requirements, for which a registrant is responsible, for use of x-ray equipment by or under the supervision of an individual authorized by and licensed in accordance with state statutes to engage in the healing arts. The provisions of this chapter are in addition to, and not in substitution for, other applicable provisions of these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-010, filed 12/8/80; Order 1084, § 402-28-010, filed 1/14/76; Order 1, § 402-28-101 (codified as WAC 402-28-010), filed 1/8/69; Rules (part), filed 10/26/66.]

[Title 246 WAC—p. 290]

WAC 246-225-010 Definitions. As used in this chapter, the following definitions apply:

(1) "Accessible surface" means the external surface of the enclosure or housing provided by the manufacturer.

(2) "Accidental radiation exposure incident" means an exposure to a patient, an operator, or a member of the public that was unintentional.

(3) "Added filter" means the filter added to the inherent filtration.

(4) "Aluminum equivalent" means the thickness of aluminum (type 1100 alloy) affording the same attenuation, under specified conditions, as the material in question. (The nominal chemical composition of type 1100 aluminum alloy is 99.00 percent minimum aluminum, 0.12 percent copper.)

(5) "Assembler" means any person engaged in the business of assembling, replacing, or installing one or more components into an x-ray system or subsystem. An assembler may be the practitioner, his/her employee, an outside contractor, or an employee of an outside firm.

(6) "Attenuation block" means a block or stack, having dimensions 20 cm by 20 cm by 3.8 cm, of type 1100 aluminum alloy or other aluminum alloys having equivalent attenuation.

(7) "Automatic exposure control" means a device which automatically controls one or more technique factors in order to obtain at a preselected location(s) a required quantity of radiation (see also "phototimer").

(8) "Barrier" (see "protective barrier").

(9) "Beam axis" means a line from the source through the centers of the x-ray fields.

(10) "Beam-limiting device" means a device which provides a means to restrict the dimensions of the x-ray field.

(11) "Beam monitoring system" means a system designed to detect and measure the radiation present in the useful beam.

(12) "C-arm x-ray system" means an x-ray system in which the image receptor and x-ray tube housing assembly are connected by a common mechanical support system in order to maintain a desired spatial relationship. This system is designed to allow a change in the projection of the beam through the patient without a change in the position of the patient.

(13) "Cephalometric device" means a device intended for the radiographic visualization and measurement of the dimensions of the human head.

(14) "Certified components" means components of x-ray systems which have been certified by the manufacturer as meeting the requirements of the federal performance standard for x-ray equipment.

(15) "Certified system" means any x-ray system which has one or more certified component(s).

(16) "Changeable filters" means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical or physical process.

(17) "Coefficient of variation (C)" means the ratio of the standard deviation to the mean value of a population of observations. It is estimated using the following equation:

(2003 Ed.)

$$c = \frac{s}{\bar{X}} = \frac{1}{\bar{X}} \left[\sum_{i=1}^n \frac{(X_i - \bar{X})^2}{n-1} \right]^{1/2}$$

where

s = Estimated standard deviation of the population.

\bar{X} = Mean value of observations in sample.

$X(i)$ = i^{th} observation sampled.

n = Number of observations in sample.

(18) "Contact therapy system" means an x-ray system wherein the x-ray tube port is put in contact with or within 5 centimeters of, the surface being treated.

(19) "Control panel" means that part of the x-ray control upon which are mounted the switches, knobs, pushbuttons, and other hardware necessary for manually setting the technique factors.

(20) "Cooling curve" means the graphical relationship between heat units stored and cooling time.

(21) "Date of transfer." See installation date.

(22) "Dead-man switch" means a switch so constructed that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.

(23) "Department" means the department of health which has been designated as the state radiation control agency.

(24) "Detector" (see "radiation detector").

(25) "Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.

(26) "Diagnostic x-ray system" means an x-ray system designed for irradiation of any part of the human or animal body for the purpose of recording or visualization for diagnostic purposes.

(27) "Direct scattered radiation" means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam (see also "scattered radiation").

(28) "Electronic product defect" means an error in design, manufacture, or performance of an x-ray system such that unintentional radiation exposure to a patient, an operator, or a member of the public has occurred.

(29) "Entrance exposure rate" means the exposure measured free-in-air per unit time where the useful beam enters the patient.

(30) "Equipment" (see "x-ray equipment").

(31) *"Exposure" means the quotient of dQ divided by dm where dQ is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass dm are completely stopped in air. (The special unit of exposure is the roentgen.)

Note: *When the word, exposure, is used in this part to mean one or more irradiations of a person for a healing arts purpose, or in a more general sense, it will not be underlined.

(32) "Field emission equipment" means equipment which uses an x-ray tube in which electron emission from the cathode is due solely to the action of an electric field.

(33) "Filter" means material placed in the useful beam to absorb preferentially selected radiations.

(34) "Fluoroscopic imaging assembly" means a component which comprises a reception system in which x-ray photons produce a fluoroscopic image. It includes equipment housings, electrical interlocks if any, the primary protective barrier, and structural material providing linkage between the image receptor and the diagnostic source assembly.

(35) "Focal spot" means the area on the anode of the x-ray tube bombarded by the electrons accelerated from the cathode, and from which the useful beam originates.

(36) "Full beam detector" means a radiation detector of such size that the total cross section of the maximum size useful beam is intercepted.

(37) "General purpose radiographic x-ray system" means any radiographic x-ray system which, by design, is not limited to radiographic examination of specific anatomical regions.

(38) "Gonad shield" means a protective barrier for the testes or ovaries.

(39) "Half-value layer (HVL)" means the thickness of specified material which attenuates the beam of radiation to an extent such that the exposure rate is reduced to one-half of its original value. In this definition the contribution of all scattered radiation, other than any which might be present initially in the beam concerned, is deemed to be excluded.

(40) "Healing arts screening" means the testing of an asymptomatic population using x-ray machines for the detection or evaluation of health indications when such tests are not specifically and individually ordered by a licensed practitioner of the healing arts legally authorized to prescribe such x-ray tests for the purpose of diagnosis or treatment.

(41) "Heat unit" means a unit of energy equal to the product of the peak kilovoltage, milliamperes, and seconds, i.e., kVp x mA x second.

(42) "Image intensifier" means a device consisting of an image intensifier tube installed in its housing which instantaneously converts an x-ray pattern into a light image of higher energy density.

(43) "Image receptor" means any device, such as a fluorescent screen or radiographic film, which transforms incident x-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.

(44) "Image receptor support" means that part of a mammographic system designed to support the image receptor in a plane perpendicular to the x-ray beam during mammography.

(45) "Inherent filtration" means the filtration of the useful beam provided by the permanently installed components of the tube housing assembly.

(46) "Installation date" means the earliest date that a machine, accessory, or component is able to be used by a registrant or transferee but no later than the date of the first human exposure made using the machine, accessory, or component that has been installed.

(47) "Interlock" means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

(48) "Irradiation" means the exposure of matter to ionizing radiation.

(49) "Kilovolts peak (kVp)" (see "peak tube potential").

(50) "kV" means kilovolts.

(51) "kWs" means kilowatt second which is equal to the product of peak kilovolts, amperes, and seconds or $10^{-3} \text{ X kV X mA X sec}$.

(52) "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

(53) "Leakage radiation" means radiation emanating from the diagnostic or therapeutic source assembly except for:

(a) The useful beam and

(b) Radiation produced when the exposure switch or timer is not activated.

(54) "Leakage technique factors" means the technique factors associated with the tube housing assembly which are used in measuring leakage radiation. They are defined as follows:

(a) For capacitor energy storage equipment, the maximum rated peak tube potential and the maximum rated number of exposures in an hour for operation at the maximum rated peak tube potential with the quantity of charge per exposure being 10 milliampere seconds, or the minimum obtainable from the unit, whichever is larger.

(b) For field emission equipment rated for pulsed operation, the maximum rated peak tube potential and the maximum rated number of x-ray pulses in an hour for operation at the maximum rated peak tube potential.

(c) For all other equipment, the maximum rated peak tube potential and the maximum rated continuous tube current for the maximum rated peak tube potential.

(55) "Light field" means that area of the intersection of the light beam from the beam-limiting device and one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the illumination is one-fourth of the maximum in the intersection.

(56) "Line-voltage regulation" means the difference between the no-load and the load line potentials expressed as a percent of the load line potential; that is,

$$\text{Percent line-voltage regulation} = 100 (V_n - V_l) / V_l$$

where:

V_n = No-load line potential

V_l = Load line potential

(57) "mA" means tube current in milliamperes.

(58) "mAs" means milliampere second or the product of the tube current in milliamperes and the time of exposure in seconds.

(59) "Maximum line current" means the root mean squared current in the supply line of an x-ray machine operating at its maximum rating.

(60) "Mobile equipment" (see "x-ray equipment").

(61) "Modified installation" means a room, building, office, or facility in which structural parameters which affect radiation safety are being changed; these parameters include such things as reconstruction or moving of walls, replacement of the x-ray machine with one of higher kVp or mA, a change in the direction of the beam, replacement of the control panel so that operator protection is adversely affected, a change in occupancy of adjacent areas, workload changes, etc.

(62) "New installation" means a room, building, office, or facility newly built, or in which previously there has been no radiation machine.

(63) "Peak tube potential" means the maximum value of the potential difference across the x-ray tube during an exposure.

(64) "Phantom" means a volume of material similar to tissue with respect to attenuation and scattering of x-ray photons. This requires that the atomic number (Z) and the density of the material be similar to those of tissue.

(65) "Phototimer" - means a device which controls radiation exposure to the image receptor by detecting the total amount of radiation reaching the device. The radiation monitoring device(s) is part of an electronic circuit which controls the time the tube is activated (see also "automatic exposure control").

(66) "Portable equipment" (see "x-ray equipment").

(67) "Position indicating device (PID)" means a device, on dental x-ray equipment which indicate the beam position and establishes a definite source-surface (skin) distance. The device may or may not incorporate or serve as a beam-limiting device.

(68) "Positive beam limitation" means the automatic or semi-automatic adjustment of an x-ray beam to the selected image receptor size, whereby exposures cannot be made without such adjustment.

(69) "Primary protective barrier" (see "protective barrier").

(70) "Protected area" means a shielded area in which attenuation of x-radiation is sufficient to meet the exposure limits of WAC 246-221-010 and the principles of WAC 246-220-007 and "ALARA" for individuals in that area.

(71) "Protective apron" means an apron made of radiation absorbing materials, used to reduce radiation exposure.

(72) "Protective barrier" means a barrier of radiation absorbing material(s) used to reduce radiation exposure.

(a) "Primary protective barrier" means the material, excluding filters, placed in the useful beam, to protect anyone other than the patient from radiation exposure.

(b) "Secondary protective barrier" means a barrier sufficient to attenuate the stray radiation to the required degree.

(73) "Protective glove" means a glove made of radiation absorbing materials used to reduce radiation exposure.

(74) "Quality assurance" is a program designed to produce high quality radiographs at minimal cost and minimal patient exposure.

(75) "Quality control" is the routine measurement of the performance of the diagnostic x-ray imaging system, from x-ray beam output to the viewing of radiographs, and the con-

tinual adjustment of that performance to an optimal and consistent level.

(76) "Radiation detector" means a device which in the presence of radiation provides by either direct or indirect means, a signal or other information suitable for use in measuring one or more quantities of incident radiation.

(77) "Radiation safety" means efforts directed at occupational exposure reduction, patient exposure reduction, image quality improvement, diagnostic imaging system quality assurance, radiation measurements, dose evaluations, compliance with state and federal regulations, and related issues.

(78) "Radiation therapy simulation system" means a fluoroscopic or radiographic x-ray system intended for localizing the volume to be exposed during radiation therapy and confirming the position and size of the therapeutic irradiation field.

(79) "Radiograph" means an image receptor on which the image is created directly or indirectly by an x-ray pattern and results in a permanent record.

(80) "Radiographic imaging system" means any system whereby a permanent or temporary image is recorded on an image receptor by the action of ionizing radiation.

(81) "Rating" means the operating limits of an x-ray system or subsystem as specified by the component manufacturer.

(82) "Recording" means producing a permanent form of an image resulting from x-ray photons (e.g., film, video tape).

(83) "Response time" means the time required for an instrument system to reach 90 percent of its final reading when the radiation-sensitive volume of the instrument system is exposed to a step change in radiation flux from zero sufficient to provide a steady state midscale reading.

(84) "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction (see also "direct scattered radiation").

(85) "Secondary protective barrier" (see "protective barrier").

(86) "Shutter" means a device attached to the tube housing assembly which can totally intercept the entire cross sectional area of the useful beam and which has a lead equivalency at least that of the tube housing assembly.

(87) "SID" (see "source-image receptor distance").

(88) "Source" means the focal spot of the x-ray tube.

(89) "Source-image receptor distance (SID)" means the distance from the source to the center of the input surface of the image receptor.

(90) "Source-to-skin-distance (SSD)" means the distance between the source and the skin entrance plane of the patient.

(91) "Special purpose x-ray equipment" means that which is designed for radiographic examination of one specific area of the body.

(92) "Spot check" means an abbreviated calibration procedure which is performed to assure that a previous calibration continues to be valid.

(93) "Spot film device" means a device intended to transport and/or position a radiographic image receptor between the x-ray source and fluoroscopic image receptor, including a device intended to hold a cassette over the input end of an image intensifier for the purpose of making a radiograph.

(94) "Spot film" means a radiograph which is made during a fluoroscopic examination to record permanently conditions which exist during that fluoroscopic procedure.

(95) "Stationary equipment" (see "x-ray equipment").

(96) "Stray radiation" means the sum of leakage and scattered radiation.

(97) "Technique factors" means the conditions of operation. They are specified as follows:

(a) For capacitor energy storage equipment, peak tube potential in kV and quantity of charge in mAs.

(b) For field emission equipment rated for pulsed operation, peak tube potential in kV and number of x-ray pulses.

(c) For all other equipment, peak tube potential in kV and:

(i) Either tube current in mA and exposure time in seconds,

(ii) Or the product of tube current and exposure time in mAs.

(98) "Transmission detector" means a radiation detector through which the useful beam or part of the useful beam passes.

(99) "Treatment volume" means the region, in the patient, to which a specified dose is to be delivered.

(100) "Tube" means an x-ray tube, unless otherwise specified.

(101) "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage and/or filament transformers and other appropriate elements when they are contained within the tube housing.

(102) "Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.

(103) "Useful beam" means the radiation which passes through the tube housing port and the aperture of the beam-limiting device when the exposure switch or timer is activated.

(104) "Variable-aperture beam-limiting device" means a beam-limiting device which has capacity for stepless adjustment of the x-ray field size.

(105) "Visible area" means that portion of the input surface of the image receptor over which incident x-ray photons produce a visible image.

(106) "Wedge filter" means an added filter with changing radio-opacities used to achieve more uniform optical densities on the image receptor when a body part of varying absorption characteristics is radiographed.

(107) "X-ray control" means a device which controls input power to the x-ray high-voltage generator and/or the x-ray tube. It includes equipment which controls the technique factors of an x-ray exposure.

(108) "X-ray equipment" means an x-ray system, subsystem, or component thereof. Types of x-ray equipment are as follows:

(a) 'Mobile' means x-ray equipment mounted on a permanent base with wheels and/or casters for moving while completely assembled.

(b) 'Portable' means x-ray equipment designed to be hand-carried.

(c) 'Stationary' means x-ray equipment which is installed in a fixed location.

(109) "X-ray field" means that area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the exposure rate is one-fourth of the maximum in the intersection.

(110) "X-ray high-voltage generator" means a device which transforms electrical energy from the potential supplied by the x-ray control to the tube operating potential. The device may also include means for transforming alternating current to direct current, filament transformers for the x-ray tube(s), high-voltage switches, electrical protective devices, and other appropriate elements.

(111) "X-ray system" means an assemblage of components for the controlled production of x-rays. It includes minimally an x-ray high-voltage generator, an x-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.

(112) "X-ray subsystem" means any combination of two or more components of an x-ray system for which there are requirements specified in this part.

(113) "X-ray tube" means any electron tube which is designed to be used primarily for the production of x-rays.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-010, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-020, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-020, filed 12/8/80; Order 1084, § 402-28-020, filed 1/14/76; Order 1, § 402-28-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-020 General requirements—Administrative controls. (1) No person shall make, sell, lease, transfer, lend, or install x-ray equipment or the accessories used in connection with such equipment unless such accessories and equipment, when properly placed in operation and properly used, shall meet the requirements of this chapter.

(2) The registrant in control of the x-ray machines shall be responsible for directing the operation of the x-ray machines. The registrant or registrant's agent shall assure the following provisions are met in the operation of the x-ray machine or machines:

(a) The registrant shall not operate an x-ray machine for diagnostic or therapeutic purposes when the x-ray machine:

- (i) Does not meet the provisions of this chapter; or
- (ii) Is malfunctioning and threatens the health or safety of the patient, operator, or general public.

(b) X-ray machine operator requirements.

(i) Individuals operating the x-ray equipment shall be adequately instructed in safe operating procedures and shall be able to demonstrate competence, upon request from the department, in the correct use of the equipment. Required areas of competence are listed in Appendix II. The department may determine compliance with subsection (2)(b) of this section by observation, interview, or testing;

(ii) A medical x-ray machine operator shall be licensed, certified or registered by the department as either:

(A) A health care practitioner, licensed under Title 18 RCW; or

(B) A diagnostic or therapeutic radiologic technologist certified in accordance with chapter 18.84 RCW; or

(C) An x-ray technician registered in accordance with chapter 18.84 RCW.

(c) At each x-ray system's control panel, a chart shall be provided which specifies for the examinations performed by that system the following information:

(i) Patient's anatomical size versus technique factors utilized;

(ii) Source to image receptor distance used;

(iii) Type and placement of patient shielding used, for example, gonad, thyroid, lap apron;

(iv) If applicable, settings for automatic exposure devices; and

(v) Type and size of film or screen-film combination to be used.

(d) When required by the department, a registrant shall create and provide to operators of the x-ray system, radiation safety procedures which address patient and occupationally-exposed personnel safety. These procedures shall define restrictions of the operating technique required for safe operation of the particular x-ray system;

(e) Except for patients who cannot be moved out of the room and the patient being examined, only the staff and ancillary personnel required for the medical procedure or training shall be present in the room during the radiographic exposure. Other than the patient being examined:

(i) All individuals shall be positioned such that no part of the body including the extremities not protected by 0.5 mm lead equivalent will be struck by the useful beam;

(ii) The x-ray operator, other staff and ancillary personnel shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent;

(iii) Patients who cannot be removed from the room shall be:

(A) Protected from the direct scatter radiation by whole body protective barriers of not less than 0.25 mm lead equivalent; or

(B) Positioned so the nearest portion of the body is at least 2 meters from both the tube head and the nearest edge of the image receptor.

(iv) The department may require additional protective devices when a portion of the body of staff or ancillary personnel is potentially subjected to stray radiation which may result in that individual receiving one quarter of the maximum permissible dose defined under WAC 246-221-010.

(f) Gonad shielding of not less than 0.5 mm lead equivalent shall be used for patients of reproductive age during radiographic procedures in which the gonads are in the direct (useful) beam, except for cases when gonad shielding may interfere with the diagnostic procedure;

(g) Persons shall not be exposed to the useful beam except for healing arts purposes. Only a licensed practitioner of the healing arts shall authorize an exposure to the useful beam. This requirement prohibits deliberate exposure for the following purposes:

(i) Exposure of an individual for training, demonstration, or other purposes unless there are also healing arts requirements and proper prescription is provided;

(ii) Except for mammography performed by registered facilities on self-referred patients, the exposure of an individual for the purpose of healing arts screening without prior written approval of the state health officer; and

(iii) Exposure of an individual for the sole purpose of satisfying a third party's prerequisite for reimbursement under any health care plan, except for exposure required under Medicare provisions.

(h) When a patient or film must be provided with auxiliary support during a radiation exposure:

(i) Mechanical holding devices shall be used when the technique permits. The safety rules, when required under subdivision (d) of this subsection, shall list individual projections where holding devices cannot be utilized;

(ii) Written safety procedures, when required under subdivision (d) of this subsection, shall indicate the requirements for selecting a human holder and the procedure the holder shall follow;

(iii) The human holder shall be protected as required under subdivision (e)(i) of this subsection;

(iv) No person shall be used routinely to hold film or patients;

(v) When the patient must hold the film, the portion of the body other than the area of clinical interest struck by the useful beam shall be protected by not less than 0.5 mm lead equivalent material;

(vi) Holding the film or the patient shall be permitted only in very unusual and rare situations.

(i) Personnel dosimetry. All persons associated with the operation of an x-ray system are subject to both the occupational exposure limits and the requirements for the determination of the doses stated under WAC 246-221-020. In addition, when protective clothing or devices are worn on portions of the body and a dosimeter is required, at least one such dosimeter shall be utilized as follows:

(i) When an apron is worn, the monitoring device shall be worn at the collar outside of the apron; and

(ii) The dose to the whole body based on the maximum dose attributed to the most critical organ shall be recorded on the reports required under WAC 246-221-230. If more than one device is used or a record is made of the data, each dose shall be identified with the area where the device was worn on the body.

(iii) Personnel monitoring of an operator shall be required where:

(A) Exposure switch cords are utilized that allow the operator to stand in an unprotected area during exposures; and

(B) Measurements by the department show ten percent of the exposure limits as specified under WAC 246-221-010 may be exceeded.

(iv) All persons involved in the operation of a fluoroscope and working within the fluoroscopy room during its operation shall wear a personnel dosimeter required under WAC 246-221-090 and subsection (2)(i)(i) of this section. If extremities are in or near the primary beam, extremity dosimeters are also required;

(j) Healing arts screening utilizing radiation. Any person proposing to conduct a healing arts screening program, with the exception of a mammography program, shall not initiate

such a program without prior approval of the state health officer. When requesting such approval, that person shall submit the information outlined under Appendix III of this part. If information submitted becomes invalid or outdated, the state health officer shall be notified immediately;

(k) When using scatter suppressing grids, the grids shall be:

(i) Clearly labelled with the focal distance for which they are designed to be used; and

(ii) Of the proper focal distance for the source-to-image distances used.

(l) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized.

(i) Film cassettes without intensifying screens shall not be used for any routine diagnostic radiological imaging.

(ii) Portable or mobile x-ray equipment shall be used only for examinations where it is impractical to transfer the patient(s) to a stationary x-ray installation.

(m) Patient log. A medical x-ray facility (chiropractors, allopathic and osteopathic physicians and hospitals only) shall record for each x-ray diagnosis or treatment the patient's name, type of x-ray procedures performed, and the date. A separate log is not necessary if the required information is retrievable by reference to other records.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-225-020, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-020, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-031, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-031, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-031, filed 12/8/80; Order 1084, § 402-28-031, filed 1/14/76. Formerly WAC 402-28-030 (part).]

WAC 246-225-030 General requirements—Plan review. (1) Before construction, the floor plans and equipment arrangement of medical installations (new or modifications of existing installations) utilizing x-rays for diagnostic or therapeutic purposes shall be submitted to:

(a) A qualified expert for determination of shielding requirements using National Council on Radiation Protection and Measurements Report No. 49, or equivalent; and

(b) The department for subsequent review.

Review shall not imply approval.

(2) The review of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose in excess of the limits required under WAC 246-221-010, 246-221-050, and 246-221-060.

(3) Diagnostic veterinary, podiatric, and dental facilities shall be exempt from submitting shielding calculations and floor plans.

(4) In order for the department to provide an evaluation, technical advice, and official review of the shielding requirements for a medical radiation installation, a floor plan drawn to scale and the following data are required:

(a) The normal location of the x-ray tube, along with an indication of anode-cathode orientation to the cassette holders;

- (b) The limits of the tube travel;
 - (c) The directions in which the tube is pointed;
 - (d) Window locations;
 - (e) The location of the control booth or operator's position;
 - (f) The exposure switch location;
 - (g) The position of the viewing window, if any;
 - (h) The composition and thickness of the walls;
 - (i) If more than one story, the height floor-to-floor;
 - (j) If more than one story, the composition and thickness of materials in the ceiling or floor;
 - (k) The make and model of the x-ray machine;
 - (l) The maximum kVp and mA;
 - (m) The types of examinations or treatments (for example, chest, spine, general x-ray, or therapy);
 - (n) The identification and occupancy of areas adjacent to the x-ray room;
 - (o) The anticipated x-ray workload expressed in number of patients and exposures per week including:
 - (i) Technique factors used, or milliamperere-seconds or milliamperere-minutes per week; and
 - (ii) Estimates of the percentage of the workload expected to occur for a particular beam direction.
- (5) For new and modified installations only, the following are minimum design requirements for medical x-ray machine operator booths. These requirements do not apply to dental, podiatry, and veterinary installations. See subsections (6) and (7) of this section for dental panoramic and cephalometric requirements.
- (a) The operator shall be allotted 0.7 sq. meters (7.5 sq. ft.) or more of unobstructed floor space in the x-ray booths.
 - (i) The 0.7 sq. meters (7.5 sq. ft.) of minimum space specified under subsection (5)(a) of this section shall be a geometric configuration where no dimension is less than 61.0 centimeters (2.0 ft.).
 - (ii) The allotted space shall exclude an encumbrance by the console, such as an overhang, cables, or other similar encroachment.
 - (iii) An extension of a straight line drawn between any point on the edge of the booth shielding and the nearest vertical edge of a vertical cassette holder, corner of the examination table, or any part of the tube housing assembly shall not impinge on the unobstructed space.
 - (iv) The booth walls shall be 2.1 meters (7.0 ft.) or more and shall be permanently fixed to the floor or other structure as may be necessary.
 - (v) When a door or moveable panel is used as the integral part of the booth structure, it must have a permissive device which will prevent an exposure when the door or panel is not closed.
 - (b) Switch placement. The operator's switch for the radiographic machine shall be fixed within the booth. The switch shall:
 - (i) Be at least 102 centimeters (forty inches) inside the protected area; and
 - (ii) Allow the operator to use the available viewing windows.
 - (c) Viewing system requirements.
 - (i) Each booth shall have at least one viewing device which shall:

- (A) Be placed so the operator can view the patient during exposure; and
- (B) Be placed so the operator can have full view of the entries into the room.
 - (ii) When the viewing system is a window, the following requirements also apply:
 - (A) The window shall have a visible area of 930 square centimeters (1.0 square foot) or more; and
 - (B) The glass shall have the same lead equivalence or more as that required in the booth's wall where the glass is mounted.
 - (iii) When the viewing system is by mirrors, the mirrors shall be located to accomplish the general requirements under subdivision (i) of this subsection.
 - (iv) When the viewing system is by electronic means (for example, TV):
 - (A) The camera shall be located to accomplish the general requirements under subdivision (i) of this subsection; and
 - (B) There shall be an alternate viewing system as a backup for electronic failure.
 - (d) New or modified facilities shall maintain a copy of the floor plan and shielding calculations required under subsection (1) of this section.
 - (6) Dimensions of primary beam shielding shall exceed the largest possible beam size by 30.5 centimeters (one foot) or more in every direction. Cephalometric primary beam shielding shall be deemed adequate if, for a maximum workload of twenty films a week, two-pound lead is installed (for occupied areas).
 - (7) A viewing device shall be present in dental panoramic and cephalometric x-ray installations, so the requirements of subsection (5)(c) of this section are met.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-032, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-032, filed 9/16/83; Order 1084, § 402-28-032, filed 1/14/76. Formerly WAC 402-28-030 (part).]

WAC 246-225-040 General requirements for diagnostic x-ray systems. In addition to other requirements of this chapter, diagnostic x-ray systems shall meet the following requirements:

- (1) *Warning label.* The control panel containing the main power switch shall bear the warning statement, legible and accessible to view: "WARNING: This x-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed."
- (2) *Battery charge indicator.* On battery-powered generators, visual means shall be provided on the control panel to indicate the battery is in a state of charge adequate for proper operation.
- (3) *Leakage radiation from the diagnostic source assembly.* The leakage radiation from the diagnostic source assembly, measured at a distance of 1 meter in any direction from the source, shall not exceed 2.58×10^{-5} coulombs per kilogram (100 milliroentgens) in one hour when the x-ray tube is operated at its leakage technique factors. Compliance shall be

determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

(4) *Radiation from components other than the diagnostic source assembly.* The radiation emitted by a component other than the diagnostic source assembly shall not exceed 5.16×10^{-7} coulombs per kilogram (2 milliroentgens) in one hour at 5 centimeters from an accessible surface of the component when it is operated in an assembled x-ray system under conditions for which it was designed. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

(5) *Beam quality.*

(a) The half-value layer (HVL) of the useful beam for a given x-ray tube potential shall not be less than the values shown in this section, Table I. If it is necessary to determine such half-value layer at an x-ray tube potential which is not listed in Table I, linear interpolation or extrapolation shall be made.

WAC 246-225-040 TABLE 1

Design operating range (kilovolts peak)	Measured potential (kilovolts peak)	Half-value layer (millimeters of aluminum equivalent)	Half-value layer (millimeter of aluminum equivalent for dental units)
Below 51—	30	0.3	N/A
	40	0.4	N/A
	50	0.5	1.5
51 to 70—	51	1.2	1.5
	60	1.3	1.5
	70	1.5	1.5
Above 70—	71	2.1	2.1
	80	2.3	2.3
	90	2.5	2.5
	100	2.7	2.7
	110	3.0	3.0
	120	3.2	3.2
	130	3.5	3.5
	140	3.8	3.8
	150	4.1	4.1

(b) For capacitor energy storage equipment, compliance shall be determined with the system fully charged and a setting of at least 10 mAs for each exposure.

(c) The required minimal half-value layer shall include the filtration contributed by materials permanently in position between the focal spot of the tube and the patient. (For example, a table top when the tube is mounted "under the table" and inherent filtration of the tube)

(d) Filtration control. For x-ray systems with variable kVp and variable filtration for the useful beam, a device shall link the kVp selector with the filters and shall prevent an exposure unless the minimum amount of filtration required by subdivision (a) of this subsection is in the useful beam for the selected kVp.

(6) *Multiple tubes.* Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes selected shall be clearly indicated prior to initiation of the exposure. Such indication shall be both on the x-ray control panel and near or on the selected tube housing assembly.

(7) *Mechanical support of tube head.* The tube housing assembly supports shall be adjusted such that the tube hous-

ing assembly remains stable during an exposure unless the tube housing movement during exposure is a designed function of the x-ray system.

(8) *Technique indicators.*

(a) The technique factors used during an exposure shall be indicated before the exposure begins, except when automatic exposure controls are used, in which case the technique factors set prior to the exposure shall be indicated.

(b) On equipment having fixed technique factors, the requirement, under subdivision (a) of this subsection may be met by permanent markings. Indication of technique factors shall be visible from the operator's position except in the case of spot films made by the fluoroscopist.

(9) Certified units. All diagnostic x-ray systems certified to comply with 21 CFR 1020 shall meet the requirements of that certification.

(10) Linearity. The difference between the ratio of exposure to mAs at one mA or mAs setting and the ratio at another mA or mAs setting shall not exceed 0.10 times the sum of the ratios. This is written as:

$$X_1 - X_2 \leq 0.10 (X_1 + X_2)$$

Where X_1 and X_2 are the ratios (mR/mAs) for each mA or mAs station.

The test shall be performed at any selections of mA or mAs without regard to focal spot size, provided neither focal spot size is less than 0.45 millimeter.

(11) kVp accuracy. The difference between the indicated and actual kVp of an x-ray machine shall not be greater than ten percent of the indicated kVp, or, alternatively, if available, the accuracy specifications of the control panel manufacturer must be met.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-040, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-035, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-035, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-035, filed 12/8/80; Order 1084, § 402-28-035, filed 1/14/76. Formerly WAC 402-28-030 (part).]

WAC 246-225-050 Fluoroscopic x-ray systems. Fluoroscopic x-ray systems shall meet the following requirements:

(1) Limitation of useful beam.

(a) The fluoroscopic tube shall not produce x-rays unless the primary barrier is in position to intercept the entire useful beam at all times.

(b) The entire cross section of the useful beam shall be intercepted by the primary protective barrier of the fluoroscopic image assembly at any source-to-image-distance (SID).

(c) Nonimage-intensified fluoroscopic equipment shall not be used.

(d) For fluoroscopic equipment without a spot film device, neither the length nor the width of the fluoroscopic x-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than three percent of the SID. The sum of the excess length and the

excess width shall be no greater than four percent of the SID. Measurements shall be made at the minimum SID available but at no less than 20 centimeters (8 inches) table top to image receptor distance.

(e) For uncertified fluoroscopic equipment with a spot film device, the fluoroscopic x-ray beam with the shutters wide open (during either fluoroscopy itself or spot films) shall be no larger than the dimensions of the largest spot film size for which the device is designed. Measurements shall be made at the minimum SID available, but at no less than 20 centimeters (8 inches) table top to the film plane distance.

(f) For certified (21 CFR 1020) fluoroscopic equipment with a spot film device, neither the length nor the width of the fluoroscopic x-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than three percent of the SID. The sum of the excess length and width shall be no greater than four percent of the SID. Measurements shall be made at the minimum SID available, but at no less than 20 centimeters (8 inches) table top to film plane distance.

(g) Fluoroscopic equipment beam limitation:

(i) Means shall be provided to reduce the beam size at the plane of the image receptor to 125 square centimeters or less; and

(ii) The minimum field size at the greatest SID shall be equal to or less than 5 centimeters by 5 centimeters.

(2) *Activation of the fluoroscopic tube.* X-ray production in the fluoroscopic mode shall be controlled by a deadman switch.

(3) *Entrance exposure rate allowable limits.*

(a) For equipment with or without automatic brightness control, the exposure rate measured at the point where the center of the useful beam enters the patient shall not exceed 2.58×10^{-3} coulombs per kilogram per minute (ten roentgens per minute), except during film recording of fluoroscopic images or when an optional high level control (HLC) is activated.

(b) For equipment provided with HLC, the equipment shall not be operable at a combination of tube potential and current which will result in an exposure rate in excess of 1.29×10^{-3} coulombs per kilogram per minute (5 roentgens per minute) at the point where the center of the useful beam enters the patient, unless the HLC is activated.

(i) Special means of activation of high level controls, such as additional pressure applied continuously by the operator, shall be required to avoid accidental use.

(ii) A continuous signal audible to the fluoroscopist shall indicate the high level control is employed.

(c) Measuring compliance of entrance exposure rate limits. Compliance with subsection (3) of this section shall be determined as follows:

(i) Movable grids and compression devices shall be removed from the useful beam during the measurement;

(ii) If the source is below the table, exposure rate shall be measured 1 centimeter above the table top or cradle;

(iii) If the source is above the table, the exposure rate shall be measured at 30 centimeters above the table top with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement;

(iv) In a C-arm type of fluoroscope, the exposure rate shall be measured 30 centimeters from the input surface of the fluoroscopic imaging assembly, with the source positioned at any available SID, provided the end of the beam-limiting device or spacer is no closer than 30 centimeters from the input surface of fluoroscopic imaging assembly; and

(v) In a lateral-type fluoroscope, the exposure rate shall be measured at a point 15 centimeters from the center line of the x-ray table with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the table top is movable, the table top shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters to the center line of the x-ray table.

(d) Periodic measurement of entrance exposure rate limits.

(i) Periodic measurements of the exposure rate shall be made. An adequate period for such measurements shall be annually or after maintenance of the system affecting the exposure rate.

(ii) Results of exposure rate measurements shall be available where the fluoroscopist has ready access to the measurements while using that fluoroscope. Results of the measurements shall include:

(A) The maximum possible coulombs per kilogram per minute (R/minute), as well as the technique factors associated with it;

(B) The name of the person performing the measurements;

(C) The last date the measurements were performed; and

(D) The type of device used in making the measurements.

(iii) Conditions of measurement:

(A) The kVp shall be adjusted to that which will produce the maximum entrance exposure rate;

(B) The high level control, if present, shall not be activated;

(C) The x-ray systems that incorporate automatic exposure rate control (automatic brightness control) shall have sufficient material, for example, lead or lead equivalence, placed in the useful beam to produce the maximum output of the x-ray system; and

(D) X-ray systems not incorporating automatic exposure rate control shall utilize whatever combination of kVp, mA, and other selectable parameters that will generate the highest exposure rate of the x-ray system. Materials, for example, an attenuation block, may be placed in the useful beam to protect the imaging system, as long as the material does not affect the measurement of the exposure rate.

(4) *Barrier transmitted radiation rate limits.*

(a) The exposure rate due to transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, if provided, shall not exceed 5.16×10^{-7} coulombs per kilogram per hour (2 milliroentgens per hour) for each 2.58×10^{-4} coulombs per kilogram per minute (roentgen per minute) of entrance exposure rate. The barrier transmission measurement shall be made at 10 centimeters from an accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor.

(b) Measuring compliance of barrier transmission.

(i) The exposure rate due to transmission through the primary protective barrier combined with radiation from the image intensifier shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

(ii) If the source is below the table top, the measurement shall be made with the input surface of the fluoroscopic imaging assembly positioned 30 centimeters above the table top.

(iii) If the source is above the table top and the SID is variable, the measurement shall be made with the end of the beam-limiting device or spacer as close to the table top as it can be placed, provided the beam-limiting device or spacer shall not be closer than 30 centimeters.

(iv) Movable grids and compression devices shall be removed from the useful beam during the measurement.

(5) *Indication of potential and current.* During fluoroscopy and cinefluorography, x-ray tube potential and current shall be continuously indicated.

(6) *Source-skin distance (SSD).* The source to skin distance shall not be less than:

(a) 38 centimeters on stationary fluoroscopes;

(b) 30 centimeters on mobile fluoroscopes; and

(c) 20 centimeters for image intensified fluoroscopes used for specific surgical application. The user must provide precautionary measures for the use of the fluoroscope due to its short SSD.

(7) *Fluoroscopic timer.*

(a) Means shall be provided to preset the cumulative on-time of the fluoroscopic tube. The maximum cumulative time of the timing device shall not exceed five minutes without resetting.

(b) A signal audible to the fluoroscopist shall indicate the completion of a preset cumulative on-time. Such signal shall continue to sound while x-rays are produced until the timing device is reset. Alternatively, the timing device may terminate exposures at the end of the preset time.

(c) Total fluoroscopic on-time for each patient shall be recorded, either in patient's chart or in a separate log.

(8) *Control of scattered radiation.*

(a) Fluoroscopic table designs when combined with normal operating procedures shall be such that no unprotected part of staff or ancillary person's body shall be exposed to unattenuated scattered radiation which originates from under the table. The attenuation required shall be not less than 0.25 mm lead equivalent.

(b) Equipment configuration when combined with procedures shall be such that no portion of staff or ancillary person's body, except the extremities, shall be exposed to the unattenuated scattered radiation emanating from above the table top unless:

(i) The radiation has passed through not less than 0.25 mm lead equivalent material, for example, drapes, Bucky-slot cover-sliding or folding panel, or self-supporting curtains, in addition to lead equivalency provided by the protective apron referred to under WAC 246-225-020 (2)(e); and

(ii) Exceptions to subdivision (b) of this subsection may be made in some special procedures where a sterile field will not permit the use of the normal protective barriers. Where

the use of prefitted sterilized covers for the barriers is practical, the department shall not permit such exception.

(9) *Radiation therapy simulation systems.* Radiation therapy simulation systems shall be exempt from the requirements of subsection (3) of this section. In addition, these systems shall be exempt from:

(a) Subsections (1) and (4) of this section provided such systems are designed and used in such a manner that no individual other than the patient is in the x-ray room when the system is producing x-rays; and

(b) Subsection (7) of this section if such systems are provided with a means of indicating the cumulative time that an individual patient has been exposed to x-rays.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-225-050, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-040, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-040, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-040, filed 12/8/80; Order 1084, § 402-28-040, filed 1/14/76; Order 1, § 402-28-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-060 Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Beam limitation. The useful beam shall be limited to the area of clinical interest and show evidence of collimation. This shall be deemed to have been met if a positive beam limiting device has been properly used or if evidence of collimation is shown on at least three sides or three corners of the film, (for example, projections from the shutters of the collimator, cone cutting at the corners or a border at the film's edge).

(1) *General purpose stationary and mobile x-ray systems.*

(a) There shall be provided a means for stepless adjustment of the size of the x-ray field such that at least two dimensions of the x-ray field are independently variable. The minimum field size at a SID of 100 centimeters shall be equal to or less than ten by ten centimeters.

(b) Adequate means shall be provided for visually defining the perimeter of the x-ray field. The total misalignment of the edges of the visually defined field with the respective edges of the x-ray field along either the length or width of the visually defined field shall not exceed 2 percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the central axis of the x-ray beam.

(2) *In addition to the requirements of WAC 246-225-060(1) above all stationary x-ray systems shall meet the following requirements:*

(a) Means shall be provided to indicate when the axis of the x-ray beam is perpendicular to the plane of the image receptor and to align the center of the x-ray field with respect to the center of the image receptor to within 2 percent (5 percent for equipment manufactured prior to August 1974) of the SID. Dental lateral jaw examinations shall be excluded from this requirement;

(b) The beam-limiting device shall numerically indicate the field size in the plane of the image receptor to which it is adjusted;

(c) Indication of field size dimensions and SID's shall be specified in inches and/or centimeters;

(d) Indication of field size dimensions shall be such that aperture adjustments result in x-ray field dimensions in the plane of the image receptor to within 2 percent of the SID when the beam axis is perpendicular to the plane of the image receptor.

(3) *Radiographic equipment designed for only one image receptor size at a fixed SID shall be provided with means to limit the field at the plane of the image receptor to dimensions no greater than those of the image receptor, and to align the center of the x-ray field with the center of the image receptor to within 2 percent of the SID.*

(4) *Special purpose x-ray systems.*

(a) These systems shall be provided with means to limit the x-ray field in the plane of the image receptor so that such field does not exceed each dimension of the image receptor by more than 2 percent of the SID when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

(b) These systems shall be provided with means to align the center of the x-ray field with the center of the image receptor to within 2 percent (5 percent for equipment manufactured prior to August 1974) of the SID.

(c) The above WAC 246-225-060 (4)(a) and 246-225-060 (4)(b) may be met with a system that meets the requirements for a general purpose x-ray system as specified in WAC 246-225-060(1) or, when alignment means are also provided, may be met with either:

(i) An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed (each such device shall have clear and permanent markings to indicate the image receptor size and SID for which it is designed); or

(ii) A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed. Permanent, clearly legible markings shall indicate the image receptor size and SID for which each aperture is designed and shall indicate which aperture is in position for use.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-060, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-051, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-051, filed 12/8/80; Order 1084, § 402-28-051, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-070 Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Radiation exposure control devices. (1) *Timers.* Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition, it shall be impossible to make an exposure when the timer is set to a zero or off position if either position is provided.

[Title 246 WAC—p. 300]

(2) *X-ray control (exposure switch):*

(a) A control which shall be the equivalent of a dead-man switch, shall be incorporated into each x-ray system such that an exposure can be terminated at any time except for:

(i) Exposure of one-half second or less, or

(ii) During serial radiography when means shall be provided to permit completion of any single exposure of the series in process.

(b) Each x-ray control shall be located in such a way as to meet the following requirements:

(i) Stationary x-ray systems shall be required to have the x-ray exposure switch permanently mounted in a protected area so that the operator has no choice but to remain in that protected area during the entire exposure;

(ii) Mobile and portable x-ray systems shall have:

(A) An exposure cord which can extend for a minimum of 12 feet from the patient; or

(B) A protective barrier of 0.25 millimeter lead equivalent between the patient and the operator.

(c) Each x-ray control shall provide visual evidence to the operator that x-rays are being produced and an audible signal that the exposure has terminated.

(3) *Automatic exposure controls (phototimers).* When an automatic exposure control is provided:

(a) Indication shall be made on the control panel when this mode of operation is selected;

(b) When the x-ray tube potential is equal to or greater than 50 kVp, the minimum exposure time for field emission equipment rated for pulsed operation shall be equal to or less than the interval equivalent to two pulses;

(c) The minimum exposure time for all equipment other than that specified in WAC 246-225-070 (3)(b) shall be equal to or less than 1/60 second or a time interval required to deliver 5 mAs, whichever is greater.

(4) *Timer reproducibility.* With a timer setting of 0.5 seconds or less, the difference between the maximum exposure time (Tmax) and the minimum exposure time (Tmin) shall be less than or equal to 10% of the average exposure time (T), when four timer tests are performed:

$$(T_{\max} - T_{\min}) \leq 0.1T$$

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-070, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-052, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-052, filed 12/8/80; Order 1084, § 402-28-052, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-080 Radiographic systems other than fluoroscopic, dental intraoral, or veterinary systems—Source-to-skin or receptor distance. (1) *Limitation.* All radiographic systems shall be provided with a durable, securely fastened means to limit the source-to-skin distance to not less than 23 centimeters. The requirement can be met when the collimator or cone provides the required limits.

(2) *Source to receptor distance measuring device.* All radiographic systems shall be provided with a device or reference, other than a collimator light localizer, which will

(2003 Ed.)

indicate the selected source to image receptor distance (SID) to within 2 percent of the indicated SID.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-053, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-053, filed 12/8/80; Order 1084, § 402-28-053, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-090 Radiographic systems other than fluoroscopic and dental intraoral—Exposure reproducibility. The exposure produced shall be reproducible to within the following criterion: When all technique factors are held constant, the coefficient of variation shall not exceed 0.05.

(1) For manual exposure control mode, this shall be deemed to have been met if when four exposures at identical technique factors are made, the difference between the maximum exposure value (E_{max}) and the minimum exposure value (E_{min}) shall be less than or equal to 10% of the average exposure (E):

$$(E_{max}) - (E_{min}) \leq 0.10E$$

(2) For phototimed exposure control mode, this shall be deemed to have been met if when four exposures at identical technique factors are made, the difference between the maximum exposure value (E_{max}) and the minimum exposure value (E_{min}) shall be less than or equal to 10% of the average exposure (E):

$$(E_{max}) - (E_{min}) \leq 0.1E$$

The four exposures are to be made under the following conditions in phototimed mode:

- (a) The kV is held constant.
- (b) The mA, if selectable, is held constant.
- (c) The selected density, if selectable, is held constant.
- (d) Selection of phototimer radiation detectors (single or multiple detectors selected), if available, is varied for each of the four exposures.
- (e) The same attenuator is placed in the x-ray field between the selected phototimer radiation detectors (photocells) and the radiation detector used to determine the four exposure values.
- (f) The selected phototimer radiation detectors (photocells) are within the x-ray field during each exposure measurement and are covered completely by the attenuator.

(3) Systems employing deliberately mismatched phototimed cells are permitted, providing written specifications for the mismatch are available for inspection.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-090, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-054, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-054, filed 12/8/80; Order 1084, § 402-28-054, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-100 Radiographic systems—Standby radiation from capacitor energy storage equipment. Radiation emitted from the x-ray tube when the exposure switch or timer is not activated shall not exceed a rate of 2 milliroentgens per hour at 5 centimeters from any accessible sur-

(2003 Ed.)

face of the diagnostic source assembly, with the beam-limiting device fully open.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-055, filed 12/8/80; Order 1084, § 402-28-055, filed 1/14/76. Formerly WAC 402-28-050 (part).]

WAC 246-225-110 Intraoral dental radiographic systems. In addition to the provisions of WAC 246-225-020, 246-225-030, and 246-225-040 the requirements of this section apply to x-ray equipment and associated facilities used for dental radiography. Criteria for extraoral dental radiographic systems are covered in WAC 246-225-060, 246-225-070, and 246-225-080.

(1) *Source-to-skin distance (SSD).* X-ray systems designed for use with an intraoral image receptor shall be provided with means to limit source-to-skin distance to not less than:

- (a) 18 centimeters if operable above 50 kilovolts peak, or
- (b) 10 centimeters if operable only at 50 kilovolts peak.
- (2) *Field limitation.*

(a) Radiographic systems designed for use with an intraoral image receptor shall be provided with means to limit the x-ray beam such that:

(i) If the minimum source-to-skin distance (SSD) is 18 centimeters or more, the x-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 7 centimeters; and

(ii) If the minimum SSD is less than 18 centimeters, the x-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 6 centimeters.

(b) An open ended position indicating device shall be used. The shielding shall be equivalent to that required for the diagnostic source assembly (WAC 246-225-040(3)).

(3) *Timers.* Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. In addition,

(a) Termination of exposure shall cause automatic resetting of the timer to its initial setting or to zero.

(b) It shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

(4) *X-ray control exposure switch:*

(a) A control, which shall be the equivalent of a dead-man switch, shall be incorporated into each x-ray system.

(b) Each x-ray control shall be located in such a way as to meet the following criterion:

(i) For stationary x-ray systems it shall be required that the control switch be permanently mounted in a protected area (e.g., corridor outside the room) so that the operator has no choice but to remain in that protected area during the entire exposure.

(ii) Permanently mounted in a protected area shall be interpreted as meaning that the exposure switch is fixed in position no less than 36 inches from access to the direct scatter radiation field.

(c) The x-ray control shall provide a visual or audible indication of x-ray production or termination at the operator's protected position.

(5) *Exposure reproducibility.* The co-efficient of variation shall not exceed 0.05 when all technique factors are held constant. This requirement shall be deemed to have been met if, when four exposures are made at identical technique factors, the difference between the maximum exposure (E_{max}) and the minimum exposure (E_{min}) shall be less than or equal to 10% of the average exposure (E):

$$(E_{max} - E_{min}) < 0.1E$$

(6) No diagnostic dental x-ray machine with a fixed, nominal kVp of less than 50 shall be permitted.

(7) *Operating controls.*

(a) Patient and film holding devices shall be used when the techniques permit.

(b) Neither the tube housing nor the position indicating device shall be hand held during an exposure. The tube housing shall remain stable during exposure.

(c) The x-ray system shall be arranged and operated in such a manner that the useful beam at the patient's skin does not exceed the dimensions specified in WAC 246-225-110 (2)(a).

(d) Dental fluoroscopy without image intensification shall be prohibited.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-110, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-080, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-080, filed 12/8/80; Order 1084, § 402-28-080, filed 1/14/76; Order 1, § 402-28-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-120 Therapeutic x-ray installations less than 1 MeV. (1) Equipment requirements.

(a) *Leakage radiation.* When the tube is operated at its leakage technique factors, the leakage radiation shall not exceed the value specified at the distance specified for the classification of that x-ray system:

(i) Contact therapy systems. Leakage radiation shall not exceed 100 milliroentgens per hour at five centimeters from the surface of the tube housing assembly;

(ii) Zero to one hundred fifty kVp systems. Systems shall have a leakage radiation which does not exceed one roentgen in one hour at one meter from the source;

(iii) One hundred fifty-one to nine hundred ninety-nine kVp systems. The leakage radiation shall not exceed one roentgen in one hour at one meter from the source except systems that operate in excess of 500 kVp may have a leakage radiation at one meter from the source equivalent to the exposure within one hour of the useful beam at one meter from the source multiplied by a factor of 0.001.

(b) *Permanent beam limiting devices.* Permanent fixed diaphragms or cones used for limiting the useful beam shall provide the same or higher degree of protection as that required by the tube housing assembly.

(c) *Removable and adjustable beam limiting devices.*

(i) Removable beam limiting devices shall, for the portion of the useful beam to be blocked by these devices, transmit not more than one percent of the original x-ray beam at the maximum kilovoltage and maximum treatment filter;

(ii) Adjustable beam limiting devices installed after the effective date of this section shall meet the requirements of (c)(i) of this subsection;

(iii) Adjustable beam limiting devices installed before the effective date of this section shall, for the portion of the x-ray beam to be blocked by these devices, transmit not more than five percent of the original x-ray beam at the maximum kilovoltage and maximum treatment filter.

(d) *Filter and wedge systems.* Filter systems shall meet the following requirements:

(i) Filters cannot be accidentally displaced from the useful beam at any possible tube orientation;

(ii) Each filter is marked as to its material of construction and its thickness or wedge angle for wedge filters;

(iii) It shall be possible for the operator to determine the presence or absence of each filter in the useful beam when the operator is at the control panel, either by display at the control panel or by direct observation; and

(iv) The filter insertion slot opening shall be covered with an attenuator equivalent to four-pound lead under operating conditions.

(e) *Tube immobilization.* The tube housing assembly shall be capable of being immobilized during stationary treatments.

(f) *Focal spot marking.* The tube housing assembly shall be so marked that it is possible to determine the location of the focal spot to within five millimeters, and such marking shall be readily accessible for use during calibration procedures.

(g) *Timer.*

(i) A timer shall be provided which has a display at the treatment control panel. The timer shall be graduated in minutes and fractions of minutes. The timer shall have a preset time selector and a means of determining elapsed time;

(ii) The timer shall be a cumulative timer which activates with radiation and retains its reading after irradiation is interrupted or terminated;

(iii) The timer shall terminate irradiation when a preselected time has elapsed;

(iv) The timer shall permit accurate presetting and determination of exposure times as short as 1 second;

(v) The timer shall terminate irradiation when set to zero;

(vi) The timer shall not activate until the shutter is opened, when patient irradiation is controlled by a shutter mechanism.

(h) *Control panel functions.* The control panel, in addition to the displays required in other provisions of this chapter, shall have:

(i) An indication of whether x-rays are being produced;

(ii) Means for indicating kV and x-ray tube current;

(iii) The means for terminating an exposure at any time;

(iv) A locking device which will prevent unauthorized use of the x-ray system; and

(v) For x-ray equipment manufactured after the effective date of this section, a positive display of specific filter(s) in the beam.

(i) *Source-to-patient distance.* There shall be means of determining the source-to-patient distance to within five millimeters.

(j) *Shutters.* Unless it is possible to bring the x-ray output to the prescribed exposure parameters within five seconds, the entire useful beam shall be automatically attenuated by a shutter having a lead equivalency not less than that of the tube housing assembly. In addition:

(i) After the unit is at operating parameters, the shutter shall be controlled electrically by the operator from the control panel;

(ii) An indication of shutter position shall appear at the control panel.

(k) *Low filtration x-ray tubes.* Each x-ray system equipped with a beryllium or other low-filtration window shall be clearly labeled as such upon the tube housing assembly and at the control panel;

(l) *Alignment.* When the therapy x-ray system is equipped with a light field indicating the x-ray field, the misalignment of one field edge to the other shall not exceed one percent of any source-to-treatment distance.

(2) *Facility design requirements for systems capable of operating above 50 kVp.*

In addition to shielding adequate to meet requirements of chapters 246-235 and 246-221 WAC and the shielding plan review provisions of WAC 246-225-030, the treatment room shall meet the following design requirements:

(a) *Warning lights.* Treatment rooms to which access is possible through more than one entrance shall be provided with warning lights, in a readily observable position near the outside of all access doors, which will indicate when the useful beam is "on." Or, as an alternative, entrances other than the main one shall be equipped with interior locks, activated for the period of exposure, and the main entrance shall be under control of the operator.

(b) *Voice communication.* Provision shall be made for two-way aural communication between the patient and the operator at the control panel; however, where excessive noise levels make aural communication impractical, other methods of communication shall be used.

(c) *Viewing systems.* Windows, mirrors, closed-circuit television, or an equivalent system shall be provided to permit continuous observation of the patient during irradiation and shall be so located that the operator can observe the patient from the control panel. When the primary viewing system is by electronic means (e.g., television), an alternate viewing system shall be available for use in the event of electronic failure or treatment must be discontinued until repair is made. If treatment is to be discontinued, this policy shall be included in the written safety procedures. A copy of the safety procedures shall be provided to the operator.

(d) *Additional requirements.* Treatment rooms which contain an x-ray system capable of operating above 150 kVp shall meet the following additional requirements:

(i) All necessary shielding, except for any beam interceptor, shall be provided by fixed barriers;

(ii) The control panel shall be outside the treatment room;

(iii) All doors of the treatment room shall be electronically connected to the control panel such that x-ray production cannot occur unless all doors are closed;

(iv) When the doors referred to in (d)(iii) of this subsection are opened while the x-ray tube is activated:

(A) X-ray production shall terminate within one second; or

(B) The radiation at a distance of one meter from the source shall be reduced to less than 100 milliroentgens per hour within one second.

(v) After the radiation output of the x-ray tube has been affected by the opening of any door referred to in (d)(iii) of this subsection, it shall be possible to restore the x-ray system to full operation only upon:

(A) Closing the door; and subsequently

(B) Reinitiating the exposure at the control panel.

(e) *Calibrations.*

(i) The calibration of an x-ray system shall be performed at intervals not to exceed one year and after any change or replacement of components which could cause a change in the radiation output.

(ii) The calibration of the radiation output of the x-ray system shall be performed by a qualified expert who is physically present at the facility during such calibration.

(iii) Calibration of the radiation output of an x-ray system shall be performed with a calibrated instrument. The calibration of such instrument shall be traceable to a national standard. The instrument shall have been calibrated within the preceding two years.

(iv) The calibrations made pursuant to (e)(i) of this subsection shall be such that the dose at a reference point in soft tissue can be calculated to within \pm five percent.

(v) The calibration of the x-ray system shall include, but not be limited to, the following determinations:

(A) The exposure rates for each combination of field size, technique factors, filter, and treatment distance used;

(B) The degree of alignment between the radiation field and the field indicated by the localizing device if such device is present; and

(C) An evaluation of the uniformity of the radiation field symmetry for the field sizes used and any dependence upon tube housing assembly orientation.

(vi) Records of calibration performed pursuant to (e) of this subsection shall be maintained by the registrant for two years after completion of the calibration.

(vii) A copy of the most recent x-ray system calibration shall be available for use by the operator at the control panel.

(f) *Operating procedures.*

(i) When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices shall be used;

(ii) The tube housing assembly shall not be held by an individual during exposures;

(iii) No individual other than the patient shall be in the treatment room unless such individual is protected by a barrier sufficient to meet the requirements of chapter 246-221 WAC. No individual other than the patient shall be in the treatment room during exposures when the kVp exceeds 150;

(iv) The x-ray system shall not be used in the administration of radiation therapy unless the requirements of (e) of this subsection have been met.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-225-120, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-225-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-

031 (Order 2450), § 402-28-091, filed 12/11/86; 83-19-050 (Order 2026), § 402-28-091, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-091, filed 12/8/80.]

WAC 246-225-130 X-ray and electron therapy systems with energies of one MeV and above. Chapter 246-229 WAC except WAC 246-229-100 (3) and (4) shall apply to medical facilities using therapy systems with energies 1 MeV and above.

(1) *Definitions.* In addition to the definitions provided in WAC 246-225-010, the following definitions shall be applicable to this section.

(a) "Applicator" means a structure which indicates the extent of the treatment field at a given distance from the nominal source and which may or may not incorporate an additional beam-limiting device.

(b) "Beam scattering foil" means a device which scatters and flattens a beam of electrons.

(c) "Central axis of the beam" means a line passing through the origin of the source and the center of the plane figure formed by the edge of the secondary collimating jaws when in a symmetric mode.

(d) "Dose monitoring system" means a system of devices for the detection and display of quantities of radiation.

(e) "Dose monitor unit" means a unit from which the absorbed dose can be calculated.

(f) "Existing equipment" means therapy systems subject to this section which were manufactured on or before the effective date of these regulations.

(g) "Field flattening device" means an absorber used to homogenize the dose rate over the area of a useful beam of x-rays.

(h) "Field size" means the dimensions of an area in a plane perpendicular to the specified direction of the beam of incident radiation at a maximum dose depth. Determine dimensions by fifty percent decrement lines.

(i) "Gantry" means that part of the system supporting and allowing possible movements of the radiation head.

(j) "Interruption of irradiation" means the stopping of irradiation with the possibility of continuing irradiation without resetting of the operating conditions at the control panel.

(k) "Isocenter" means a fixed point in space located at the intersection of the rotation axes of the principal movements of the therapy system.

(l) "Moving beam therapy" means radiation therapy with relative displacement of the useful beam and the patient during irradiation.

(m) "New equipment" means systems subject to this section which were manufactured after effective date of these regulations.

(n) "Nominal source" means a point from which radiation originates.

(o) "Normal treatment distance" means the distance between the virtual source and a reference point on the central axis of the beam. The reference is located at a position on the central axis at a specified distance from the nominal source.

(p) "Patient" means an individual subjected to examination and treatment.

(q) "Phantom" means a volume of material behaving in a manner similar to tissue with respect to the attenuation and scattering of radiation.

(r) "Primary dose monitoring system" means a system which will monitor the quantity of radiation produced during irradiation and which will terminate irradiation when a preselected number of dose monitor units have been acquired.

(s) "Radiation treatment prescription" means the absorbed dose which is intended to be delivered to the treatment volume.

(t) "Radiation head" means the structure from which the useful beam emerges.

(u) "Redundant dose monitoring combination" means a combination of two dose monitoring systems in which both systems are arranged to terminate irradiation in accordance with a preselected number of dose monitor units.

(v) "Secondary dose monitoring system" means a system which will terminate irradiation in the event of failure of the primary system.

(w) "Shadow tray" means a device attached to the radiation head to support auxiliary beam limiting material.

(x) "Stationary beam therapy" means radiation therapy without relative displacement of the useful beam and the patient during irradiation.

(y) "Target" means that part of a radiation source which intercepts a beam of accelerated particles with subsequent emission of other radiation.

(z) "Termination of irradiation" means the stopping of irradiation in a fashion which will not permit continuance of irradiation without the resetting of operating conditions at the control panel.

(aa) "Treatment field" means the cross-sectional area of the patient's tissue which is to be irradiated.

(bb) "Treatment volume" means that portion of the patient's body which is to be irradiated.

(2) *Requirements for equipment.*

(a) *Leakage radiation to the patient area.*

(i) New equipment shall meet the following requirements:

(A) For all operating conditions, the dose equivalent in rem due to leakage radiation, including x-ray and electrons, but excluding neutrons, at any point in a circular plane of two meters radius centered on and perpendicular to the central axis of the beam at the normal treatment distance and outside the maximum useful beam, shall not exceed 0.1 percent of the maximum dose equivalent in rem of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the plane surface. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified; and

(B) For each system the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in (a)(i)(A) of this subsection for specified operating conditions. Records for leakage radiation shall be maintained at the installation for inspection by the department.

(ii) Existing equipment (that installed prior to the effective date of the regulations) shall meet the following requirements:

(A) The leakage radiation, excluding neutrons, at any point in the area specified by (a)(i)(A) of this subsection, where such area intercepts the central axis of the beam one meter from the nominal source, shall not exceed 0.1 percent of the maximum dose equivalent in rems of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the surface of the reference circular plane. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

(B) For each system, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in (a)(ii)(A) of this subsection for specified operating conditions. Records for radiation leakage shall be maintained at the installation for inspection by the department.

(b) *Leakage radiation outside the patient area.*

(i) The dose equivalent in rem due to leakage radiation, except in the area specified in (a) of this subsection, when measured at any point one meter from the path of the charged particle, before the charged particle strikes the target or window, shall not exceed 0.1 percent for x-ray leakage of the maximum dose equivalent in rems of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the circular plane specified in (a) of this subsection.

(ii) The registrant shall determine, or obtain from the manufacturer, the actual leakage radiation existing at the positions specified in (a) of this subsection for specified operating conditions. Measurements shall be averaged over an area up to but not exceeding one hundred square centimeters at the positions specified.

(c) *Beam-limiting devices.* Secondary beam-limiting devices shall be provided and such devices shall transmit no more than two percent of the useful beam for the portion of the useful beam attenuated by the beam-limiting device. The neutron component of the useful beam shall not be included in this requirement.

(d) *Beam-modifying devices.*

(i) When the absorbed dose rate information required by subsection (2)(q) of this section is dependent on operation with a beam-flattening or beam-scattering device in place, the device shall be removable from the machine only by the use of tools.

(ii) In systems using interchangeable beam-flattening devices or beam-scattering foils:

(A) Irradiation shall not be possible until a selection of beam-modifying device is made and verified at the treatment control panel;

(B) An interlock system shall be provided to prevent irradiation when the beam-modifying device selected is not in the correct position; and

(C) A display at the control panel shall indicate what beam-modifying device is selected.

(e) *Wedges.*

(i) Presence of wedges in the beam shall be indicated at the control panel, by direct observation or by electronic means.

(ii) Each wedge removable from the system shall be clearly identified as to that wedge's material of construction, thickness, and wedge angle.

(iii) An interlock shall be provided to prevent irradiation when a wedge selection carried out in the treatment room does not agree with the wedge selection indicated at the control panel.

(f) *Beam quality.* The registrant shall obtain from the therapy x-ray system manufacturer, and have available, the following information:

(i) At various beam energies, the x-ray absorbed dose expressed as a fraction of maximum absorbed dose;

(ii) At various beam energies, the absorbed dose at the surface of the skin as a fraction of the maximum absorbed dose; and

(iii) The maximum percentage absorbed dose due to stray neutrons in the useful beam at specified operating conditions.

(g) *Beam monitors.* Therapy systems shall be provided with radiation detectors in the radiation head.

(i) New equipment shall be provided with two or more radiation detectors. The detectors shall be incorporated into two monitoring systems arranged either as a primary/primary combination or as a primary/secondary combination.

(ii) Existing equipment shall be provided with one or more radiation detectors. The detector shall be incorporated into a primary system.

(iii) The detectors and system where the detector is incorporated shall meet the following requirements:

(A) Each primary system shall have a detector which is a transmission full-beam detector placed on the patient side of beam-modifying devices;

(B) The detectors shall be removable only with tools and shall be interlocked to prevent incorrect positioning;

(C) Each detector shall be capable of independently monitoring and controlling the useful beam;

(D) Each detector shall form part of a dose-monitoring system from whose readings in dose monitor units the absorbed dose, at a reference point in the treatment volume can be calculated;

(E) For new equipment, the design of the dose-monitoring systems of subsection (2)(i) of this section shall assure the malfunctioning of one system shall not affect the correct functioning of the second system. In addition, the failure of an element common to both systems shall terminate irradiation.

(F) Each dose monitoring system shall have a legible display at the treatment control panel. Each display shall:

(I) Maintain a reading until intentionally reset to zero;

(II) Have only one scale and no scale multiplying factors in new equipment; and

(III) Utilize a design so increasing dose is displayed by increasing numbers and shall be designed so, in the event of an overdosage of radiation, the absorbed dose may be accurately determined under normal conditions of use or foreseeable failures.

(G) In the event of power failure, the dose-monitoring information required in subsection (2)(i) of this section displayed at the control panel at the time of failure shall be retrievable in one or more systems.

(h) *Beam symmetry.*

(i) A therapy machine installed after the effective date of these regulations shall have the capability of comparing the dose rates in each of the four quadrants of the central eighty percent of the useful beam.

(ii) Beam symmetry information shall be displayed at the treatment control panel making possible the following differential between quadrants:

- (A) Five percent for straight-through accelerators; and
- (B) Three percent for bending-magnet accelerators.

(iii) Beam asymmetry in excess of a ten percent quadrant differential shall cause treatment to terminate, or shall prevent irradiation.

(i) *Selection and display of dose monitor units.*

(i) Irradiation shall not be possible until a selection of a number of dose monitor units is made at the treatment control panel.

(ii) After useful beam termination, it shall be necessary manually to reset the preselected dose monitor units before treatment is reinitiated.

(iii) The preselected number of dose monitor units shall be displayed at the treatment control panel until reset manually for the next irradiation.

(j) *Termination of irradiation by the dose monitoring system.*

(i) Each of the required monitoring systems shall be capable of independently terminating an irradiation. Provision shall be made to test the correct operation of each system.

(ii) Each primary system shall terminate irradiation when the preselected number of dose monitor units is detected by the system.

(iii) Each secondary system shall terminate irradiation when a maximum of the preselected number of dose monitor units plus forty is detected by the system.

(iv) For new equipment, indicators on the control panel shall show which monitoring system terminated the beam.

(k) *Interruption switches.* It shall be possible to interrupt irradiation and equipment movements at any time from the operator's position at the treatment control panel. Following any interruption, it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change is made of a preselected value during an interruption, the equipment shall go to termination condition.

(l) *Termination switches.* It shall be possible to terminate irradiation and equipment movements, or go from an interruption condition to termination conditions, at any time from the operator's position at the treatment control panel.

(m) *Timer.*

(i) A timer shall be provided which has a display at the treatment control panel. The timer shall be graduated in minutes and decimals of minutes. The timer shall have a preset time selector and an elapsed time indicator.

(ii) The timer shall be a cumulative timer which switches on and off with the radiation and retains its reading after irradiation is interrupted or terminated. It shall be necessary to zero and subsequently reset the elapsed time indicator and the preset time selector after irradiation is terminated before irradiation shall again be possible.

(iii) The timer shall terminate irradiation when a preselected time has elapsed if the dose monitoring systems fail to terminate irradiation.

(n) *Selection of radiation type.* Equipment capable of both x-ray therapy and electron therapy shall meet the following requirements:

(i) Irradiation shall not be possible until a selection of radiation type is made at the treatment control panel;

(ii) An interlock system shall be provided to insure that the equipment can emit only the selected radiation type;

(iii) An interlock system shall be provided to prevent irradiation if selected operations carried out in the treatment room do not agree with the selected operations carried out in the treatment control panel;

(iv) With the exception of a specified number of dose monitor units for the purpose of portal film exposures, an interlock system shall be provided to prevent irradiation with x-rays when electron applicators are in place and to prevent irradiation with electrons when accessories for x-ray therapy are in place; and

(v) The radiation type selected shall be displayed at the treatment control panel before and during irradiation.

(o) *Selection of energy.* Equipment capable of generating radiation beams of different energies shall meet the following requirements:

(i) Irradiation shall not be possible until a selection of energy is made at the treatment control panel;

(ii) An interlock system shall be provided to insure the equipment can emit only the energy of selected radiation;

(iii) An interlock system shall be provided to prevent irradiation if selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel; and

(iv) The energy selected shall be displayed at the treatment control panel before and during irradiation.

(p) *Selection of stationary beam therapy or moving beam therapy.* Equipment capable of both stationary beam therapy and moving beam therapy shall meet the following requirements:

(i) Irradiation shall not be possible until a selection of stationary beam therapy or moving beam therapy is made at the treatment control panel;

(ii) An interlock system shall be provided to insure the equipment can operate only in the selected mode;

(iii) An interlock system shall be provided to prevent irradiation when any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel;

(iv) An interlock system shall be provided to terminate irradiation when the movement stops during moving beam therapy;

(v) Moving beam therapy shall be controlled so the required relationship between the number of dose monitor units and movement is obtained; and

(vi) The mode of operation shall be displayed at the treatment control panel.

(q) *Absorbed dose rate.* For new equipment, a system shall be provided from whose readings the absorbed dose rate at a reference point in the treatment volume can be calculated.³ In addition:

(i) The quotient of the number of dose monitor units by time shall be displayed at the treatment control panel; and

(ii) If the equipment can deliver, under any conditions, an absorbed dose rate at the normal treatment distance more than twice the maximum value specified by the manufacturer's anticipated dose rate for any machine parameters utilized, a device shall be provided which terminates irradiation when the absorbed dose rate exceeds a value twice the specified maximum. The value at which the irradiation is terminated shall be in a registrant-maintained record.

(r) *Location of focal spot and beam orientation.* The registrant shall determine, or obtain from the manufacturer, the location with reference to an accessible point on the radiation head of:

(i) The x-ray target or the virtual source of x-rays;

(ii) The electron window or the scattering foil;

(iii) All possible orientations of the useful beam.

(s) *System interlock checks.* Capabilities shall be provided to check radiation safety interlocks. When preselection of operating conditions requires action in the treatment room and at the treatment control panel, selection at one location shall not give a display at the other location until the requisite selected operations in both locations are completed.

(t) *Facility and shielding requirements.* In addition to chapter 246-221 WAC, the following design requirements shall apply:

(i) Except for entrance doors or beam interceptors, required barriers shall be fixed barriers;

(ii) The treatment control panel shall be located outside the treatment room;

(iii) Windows, mirrors, closed-circuit television, or other equivalent viewing systems shall be provided to permit continuous observation of the patient during irradiation and shall be located so the operator may observe the patient from the treatment control panel. When the viewing system is by electronic means, for example, by television, an alternate viewing system shall be provided for use in the event of the primary system failure, or, alternatively, treatments shall be discontinued until the viewing system is again functional;

(iv) Provision shall be made for two-way aural communication between the patient and the operator at the treatment control panel. However, where excessive noise levels make aural communications impractical, other methods of communication shall be used;

(v) Treatment rooms to which access is possible through two entrances or more shall be provided with warning lights and shall indicate when the useful beam is "on" in a readily observable position near the outside of all access doors; and

(vi) Interlocks shall be provided so entrance doors shall be closed before treatment is initiated or continued. When the radiation beam is interrupted by any door opening, it shall be possible to restore the machine to operation only by closing the door and reinitiating exposure by manual action at the control panel.

(u) *Surveys, calibrations, spot checks and operating procedures.*

(i) Survey.

(A) New facilities, and existing facilities not previously surveyed, shall have a survey made by, or under the direction of, a qualified expert. Such surveys shall also be done after a

change in the facility or equipment causing a significant increase in radiation hazard.

(B) The registrant shall obtain a written report of the survey from the qualified expert and the registrant shall transmit a copy of the report to the department.

(C) The report shall indicate instances where the installation, in the opinion of the qualified expert, is in violation of applicable regulations and shall cite the section violated.

(ii) Calibrations.

(A) The calibration of systems subject to this section shall be performed before the system is first used for irradiation of patient and thereafter at time intervals which do not exceed twelve months and after any change which significantly alters the calibration, spatial distribution, or other characteristics of the therapy beam.

(B) The calibration shall be performed by a qualified expert.

(C) Calibration of the dose equivalent of the therapy beam shall be performed with a measurement instrument of which the calibration is traceable to national standards of exposure or absorbed dose and which shall have been calibrated within the preceding two years.

(D) Calibrations made under subsection (2)(u)(ii) of this section shall require the dose at a reference point in soft tissue be calculated within ± 5 percent.

(E) The calibration of the therapy beam shall include, but not be limited to, the following determinations:

(I) Verification that the equipment is operating in compliance with the design specifications concerning the light localizer, the side light and back-pointer alignment with the isocenter, when applicable, variation in the axis of rotation for the table, gantry and jaw system, and beam flatness and symmetry at specified depths;

(II) The output factors in terms of dose per monitor unit or dose per minute at a specific depth in a phantom for the range of field sizes used, for each effective energy, and for each treatment distance used for radiation therapy;

(III) The congruence between the radiation field and the field indicated by the localizing device; and

(IV) The uniformity of the radiation field and its dependency upon the direction of the useful beam.

(F) Records of the calibration performed under subsection (2)(u)(ii) of this section shall be maintained by the registrant for two years after completion of the calibration.

(G) A copy of the latest calibration performed under subsection (2)(u)(ii) of this section shall be available for operator use.

(iii) Spot checks. Spot checks shall be performed on the system subject to this section. Such spot checks shall meet the following requirements:

(A) A qualified expert shall develop, in writing, spot check procedures;

(B) The measurements taken during spot checks shall demonstrate the degree of consistency of the operating characteristics affecting the radiation output of the system or the radiation delivered to a patient during a therapy procedure;

(C) The spot check procedures shall specify the frequency of tests or measurements performed;

(D) For systems where beam quality can vary significantly, spot checks shall include quality checks;

(E) Where a system has built-in devices which provide a self-check of any parameter during irradiation, the spot check procedures shall require the parameter be independently verified at specific time intervals;

(F) Erratic spot checks or inconsistent spot checks of calibration data shall be promptly investigated and corrected before the system is used for patient irradiation;

(G) When a spot check indicates a significant change in the operating characteristics of a system, as specified in the qualified expert's spot check procedures, the system shall be recalibrated as required under subsection (2)(u)(ii) of this section;

(H) Records of spot check measurements performed under subsection (2)(u)(iii) of this section shall be maintained by the registrant for a period of one year or for twice as long as the spot check cycle, whichever is greater;

(I) Operating procedures.

(I) No individual other than the patient shall be in the treatment room during treatment of a patient.

(II) If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used.

(III) The system shall not be used in the administration of radiation therapy unless subsection (2)(u)(i), (ii), and (iii) of this section are met.

³ The radiation detectors specified under subsection (2)(g) of this section may form part of this system.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-130, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-28-101, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-101, filed 12/8/80.]

WAC 246-225-140 Veterinary medicine radiographic installations. (1) Equipment.

(a) The protective tube housing shall be of diagnostic type.

See WAC 246-225-040(4).

(b) Diaphragms, cones, or a stepless adjustable collimator shall be used for collimating the useful beam to the area of clinical interest and shall provide the same degree of protection as is required of the housing. Cones or diaphragms, if used, shall be marked with their field size and the distance at which they are to be used.

(c) The half-value layer (HVL) of the useful beam shall not be less than as shown in the following table:

Measured Potential (kilovolts peak)	Half-value Layer (millimeters of aluminum equivalent)
70 and below	1.5
71	2.1
80	2.3
90	2.5
100	2.7
110	3.0
120	3.2

(d) A device shall be provided to terminate the exposure after a preset time or exposure. It must not be possible for the device to allow an exposure when preset at "zero" or "off."

(e) A dead-man type of exposure switch shall be provided, together with an electrical cord of sufficient length, so that the operator can stand out of the useful beam and at least two meters from the animal during all x-ray exposures.

(f) Reproducibility requirements as described under WAC 246-225-090.

(2) *Structural shielding.* All wall, ceiling, and floor areas shall be equivalent to or provided with applicable protective barriers as required in WAC 246-225-030(1).

(3) *Operating procedures.*

(a) In any application in which the operator is not located behind a protective barrier, clothing consisting of a protective apron having a lead-equivalent of not less than 0.25 millimeters shall be worn by the operator and any other individuals in the room during exposures.

(b) No individual other than the operator shall be in the x-ray room while exposures are being made unless such individual's assistance is required.

(c) When an animal or film must be held in position during radiography, mechanical supporting or restraining devices should be used. If the animal must be held by an individual, that individual shall be protected with appropriate shielding devices, such as protective gloves and apron, and that individual shall be so positioned that no part of that individual's body will be struck by the useful beam. The requirements of WAC 246-221-090, Personnel monitoring, and WAC 246-225-020 (2)(h)(iv) apply to such individuals.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-140, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-110, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-110, filed 12/8/80; Order 1084, § 402-28-110, filed 1/14/76; Order 1, § 402-28-110, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-225-150 X-ray film developing requirements. Compliance with this section is required of healing arts registrants and is designed to ensure the patient and operator exposure is minimized, and to produce optimum image quality and diagnostic information.

(1) Manual processing of films:

(a) The following relationship between temperature of the developer and development time must be used (standard chemistry only):

THERMOMETER READINGS (DEGREES)	MINIMUM DEVELOPING TIMES (MINUTES)
C F	
27- 80	2
	2
	2 1/2
	2 1/2
24- 76	3
	3
	3 1/2
	3 1/2
22- 72	4
	4
	4 1/2
	4 1/2

THERMOMETER READINGS (DEGREES)	MINIMUM DEVELOPING TIMES (MINUTES)
20- 68	5
67	5 1/2
66	5 1/2
65	6
18- 64	6 1/2
63	7
62	8
61	8 1/2
16- 60	9 1/2

(b) *Processing of film.* All films shall be processed to achieve adequate sensitometric performance. This criterion shall be adjudged met if:

- (i) Film manufacturer's published recommendations for time and temperature are followed; or
- (ii) Each film is developed in accordance with the time-temperature chart as required under subdivision (a) of this subsection.

(c) Devices shall be available giving:

- (i) The actual temperature of the developer; and
 - (ii) An audible or visible signal indicating the termination of a preset time (in minutes).
- (d) Chemical-film processing control.
- (i) Chemicals shall be mixed in accordance with the chemical manufacturer's recommendations.

(ii) Developer replenisher shall be periodically added to the developer tank based on the recommendations of the chemical or film manufacturer. Solution may be removed from the tank to permit the addition of an adequate volume of replenisher.

(iii) All processing chemicals shall be completely replaced at least every two months.

(2) Automatic film processors shall be set up and maintained so radiographic density and contrast are optimal. This criterion shall be adjudged met if:

(a) Film manufacturer's published specifications for time and temperature are followed. In the absence of such specifications, the film shall be developed using the following chart:

MINIMAL REQUIRED DEVELOPER TEMPERATURE		PROCESSOR DEVELOPER IMMERSION TIME*
°C	°F	Seconds
35	95	20
34.5	94	21
34	93	22
33.5	92	23
33	91	24
32	90	25
31.5	89	26
31	88	27
30.5	87	28
30	86	29
29.5	85	30

* Immersion time only, no cross-over time included.

The specified developer temperature and immersion time shall be posted in the dark room or on the automatic processor; and

(b) Replenishment of the developer chemistry is optimal:

(i) The processor shall deliver an adequate rate of developer replenishment; and

(ii) For facilities with a low x-ray workload, standby replenishment, flood replenishment, or periodically sending prefixed films through the processor may be necessary.

(c) Sensitometric tests of processor performance demonstrate the processor is achieving radiographic density and contrast equal to other processor models operating at equivalent developer immersion time and developer temperatures and using comparable chemistry.

(3) *Darkrooms.* Darkrooms shall be constructed so film being processed, handled, or stored will be exposed only to light passed through a safelight filter. The filter shall be of the type specified by the film manufacturer. Bulb wattage in the safelight shall be no greater than fifteen watts. The safelight shall be mounted at least 1.2 meters (four feet) above work areas.

(4) The department shall make x-ray film development and darkroom tests as necessary to determine compliance with this section.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-225-150, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-225-150, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-225-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-28-990, filed 9/16/83; Order 1084, Appendix C (codified as WAC 402-28-990), filed 1/14/76.]

WAC 246-225-160 Mammography. (1) The use of a special purpose x-ray machine designed and used solely for mammography is required. Exempted from this requirement shall be x-ray equipment using xerography for evaluation of breast implant integrity.

(2) All mammographic calibration, evaluation, service, and quality control actions shall be documented in writing and maintained at the facility for a three-year period. Records must be easily accessible to operators of these x-ray units.

(3) All tests requiring the use of a breast phantom shall employ a phantom similar to or identical to the one required by the American College of Radiology for its mammography accreditation program.

(4) Machine requirements:

(a) Mammography x-ray machines must be evaluated upon any major component change and on a yearly basis by a qualified medical physicist. Evaluation shall document (but is not limited to) half-value layer (HVL), kVP accuracy, reproducibility, timer accuracy, resolution achieved with film in use at the facility, focal spot size, mA linearity, light versus x-ray field alignment, and patient exposures (glandular tissue dose) following the measurement protocol in NCRP Report No. 85 (using a breast phantom). This requirement shall include initial acceptance testing upon the x-ray system's installation prior to human use.

(b) The half-value layer (HVL) for film/screen mammography shall be between the values of measured kVp/100 and measured kVp/100 + 0.1 millimeters aluminum. The half-value layer for xerography shall be at least 1.2 mm but no greater than 1.6 mm of aluminum as measured at 50 kVP. The HVL shall include the contribution to filtration made by the compression device.

(c) Exposure reproducibility: Manual techniques. See WAC 246-225-090.

(d) Exposure reproducibility: Photo-timed techniques. Mammographic systems in the AEC mode shall be able to maintain constant film density to within an optical density of ± 0.3 of the average optical density over the range of clinically used kVps, using BR-12 or other breast equivalent material phantom thicknesses of 2 centimeters to 6 centimeters. If the facility has established a technique chart that utilizes varying technical factors for different breast thicknesses, those adjustments in technique may be used when complying with this requirement.

(e) Radiographic timers. See WAC 246-225-070.

(f) kVP accuracy: The kVP accuracy published by the x-ray machine manufacturer shall be maintained at the specified level. For determination of actual versus indicated kVP, the manufacturer's recommendations for testing shall be followed.

(g) mA linearity. See WAC 246-225-040(10).

(h) All special purpose x-ray machines designed solely for mammography and installed after January 1, 1992, shall be equipped with a milli-ampere-second (mAs) read-out device, registering after each phototimed exposure. Alternatively, a means of determining mAs after each exposure shall be provided.

(i) Beam limitation:

(i) Mammographic systems shall be provided with means to limit the useful beam such that the x-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor at any designed SID except the edge of the image receptor designed to be adjacent to the chest wall where the x-ray field may not extend beyond such edge by more than two percent of the SID.

(ii) Beam limiting devices consisting of an assortment of fixed, removable cones sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is designed shall have clear and permanent markings to indicate the image receptor size and SID for which it is designed.

(iii) When the beam limiting device and image receptor support device are designed to be used to immobilize the breast during a mammographic procedure and the SID may vary, the SID indication specified in WAC 246-225-060 (4)(c)(i) and (ii) shall be the maximum SID for which the beam limiting device or aperture is designed.

(iv) In the absence of a visually defined x-ray field each image receptor support shall have clear and permanent markings to indicate the maximum image receptor size for which it is designed.

(j) The combination of source-to-image distance, magnification, and focal spot size shall result in a radiographic resolution of at least 12 line pairs per millimeter. This standard applies to the mammographic, single emulsion film being used at the facility.

(k) The x-ray machine shall be equipped with a means of immobilizing and compressing the breast with a force of at least twenty-five pounds but no greater than forty pounds.

(l) Dedicated mammographic x-ray units are exempted from the requirements of WAC 246-225-030 (5)(b)(i) pro-

vided that appropriate operator shielding is employed (as defined by NCRP Report 49).

(m) *Transmission limit for image receptor supporting devices used for mammography.* For x-ray systems manufactured after September 5, 1978, which are designed only for mammography, the transmission of the primary beam through any image receptor support provided with the system shall be limited such that the exposure 5 centimeters from any accessible surface beyond the plane of the image receptor supporting device does not exceed 25.8 nanocoulombs per kilogram (0.1 milliroentgen) for each activation of the tube. Exposure shall be measured with the system operated at the minimum SID for which it is designed. Compliance shall be determined at the maximum rated peak tube potential for the system and at the maximum rated product of tube current and exposure time (mAs) for that peak tube potential. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

(n) Maximum glandular doses. Glandular tissue dose for a cranio-caudal view of a 4.5 cm compressed breast using dose calculation methods found in NCRP Report # 85 shall not exceed the following:

Screen-film:

No grid =	1.5 milliGray (100 millirads)/projection
Grid =	2.5 milliGray (300 millirads)/projection
Xerox =	4.0 milliGray (400 millirads)/projection

(5) A quality control program shall be written and implemented for all mammographic facilities. This shall include (but shall not be limited to) tests performed, testing frequency, testing protocol, control limits for each test, corrective actions taken, and equipment maintenance/service. Program requirements include:

(a) Daily tests:

Film processor control charts using a sensitometric/densitometric based measurement system shall be required for each day the mammographic machine is in operation. Single emulsion mammographic film shall be used for this evaluation. The sensitometer shall be one with a 21-step optical attenuator.

Parameters in daily film processor tests shall include:

(i) Speed index (mid-density):

Control limits ± 0.15 optical density

(ii) Contrast index (density difference):

Control limits ± 0.15 optical density

(iii) Base + fog:

Maximum density shall not exceed 0.20 optical density.

(iv) Solution temperatures, using a digital thermometer that reads out in tenths of a degree and that is accurate to within $\pm 0.5^\circ\text{F}$.

Control limits $\pm 1.0\text{ F}$

(b) Monthly tests:

(i) Chemical replenishment rates.

(ii) Image quality evaluation. The mammographic system shall be capable of providing an image of a 0.75 mm fiber, 0.32 mm speck group, and a 0.75 mm mass from an

ACR, or equivalent, phantom on the standard mammographic image receptor system in use at the facility. Mammograms shall not be taken on patients if this minimum is not met. Any fibers, speck groups or masses larger than those specified shall also be imaged.

(c) Quarterly tests:

(i) Film/screen contact for all cassettes, using a 40-mesh copper screen.

(ii) Analyses of reject/repeat films.

(iii) Fixer retention in processed film.

(d) Semi-annual tests:

(i) Darkroom fog.

(ii) Compression device force.

(e) Yearly tests: See WAC 246-225-160 (4)(a).

(f) Cassette screens must be cleaned at least weekly.

(g) Records shall be maintained for quality control test equipment which requires calibration, and such calibrations shall be performed in accordance with recommendations of the manufacturer of the test equipment.

(h) Film processing. See WAC 246-225-150. A film processor that cannot be consistently made to operate within the control limits specified in (a) of this subsection shall not be used to process mammographic films.

(6) Operator competency:

(a) A mammographic machine operator shall be licensed, certified, or registered by the department as either:

(i) A health care practitioner, licensed under Title 18 RCW, if performing mammography is within the person's authorized scope of practice; or

(ii) A diagnostic radiologic technologist certified in accordance with chapter 18.84 RCW; or

(iii) An x-ray technician registered in accordance with chapter 18.84 RCW, with two or more years' experience in performing mammography and satisfactory completion of at least sixteen hours of training in mammographic positioning, mammographic quality assurance, and/or other related areas subject to approval by the department.

(b) A mammographic machine operator shall complete the equivalent of at least eight hours of training every twelve months covering such areas as mammographic positioning, mammographic quality assurance and other related areas subject to approval by the department.

(c) A mammographic machine operator shall meet the requirements of WAC 246-225-020 (2)(b) and 246-225-99920.

(7) Masking devices shall be made available to block extraneous light from the viewer's eye when the illuminated surface of the viewbox is larger than the exposed area on the film.

(8) Additional requirement for mobile mammography services:

The daily film processor performance testing required in subsection (5)(a) of this section shall apply to all film processors used by the mobile service. No processor shall be used unless it meets the control limits specified by subsection (5)(a)(i) through (iv) of this section.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-225-160, filed 12/9/93, effective 1/9/94; 92-05-011 (Order 240), § 246-225-160, filed 2/7/92, effective 3/9/92.]

(2003 Ed.)

WAC 246-225-99920 Appendix II—Determination of competency. The following are areas in which the department considers it important that an individual have expertise for the competent operation of x-ray equipment.

(1) *Familiarization with equipment.*

(a) Identification of controls.

(b) Function of each control.

(c) The use of a technique chart.

(2) *Radiation protection.*

(a) Collimation.

(b) Filtration.

(c) Gonad shielding and other patient protection devices.

(d) Restriction of x-ray tube radiation to the image receptor.

(e) Personnel protection.

(f) Grids.

(3) *Film processing.*

(a) Film speed as relates to patient exposure.

(b) Film processing parameters.

(c) Quality assurance and quality control.

(4) *Emergency procedures.*

Termination of exposure in event of automatic timing device failure.

(5) *Proper use of personnel dosimetry, if required.*

(6) *Understanding units of radiation.*

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-225-99920, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-225-99920, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-28-99003, filed 9/16/83; Order 1084, Appendix F (codified as WAC 402-28-99003), filed 1/14/76.]

WAC 246-225-99930 Appendix III—Information to be submitted by persons proposing to conduct healing arts screening using ionizing radiation. Persons requesting that the department approve a healing arts screening program shall submit the following information and evaluation:

(1) Name and address of the applicant and, where applicable, the names and addresses of agents within this state.

(2) Diseases or conditions and frequency for which the x-ray examinations are to be used.

(3) Description in detail of the x-ray examinations proposed in the screening program.

(4) Description of the population to be examined in the screening program, i.e., age, sex, physical condition, and other appropriate information.

(5) An evaluation of any known alternate methods not involving ionizing radiation which could achieve the goals of the screening program and why these methods are not used in preference to the x-ray examinations.

(6) An evaluation by a qualified expert of the x-ray system(s) to be used in the screening program. The evaluation by the qualified expert shall show that such system(s) satisfy all requirements of these regulations. The evaluation shall include a measurement of patient exposures from the x-ray examinations to be performed.

(7) A description of the diagnostic film quality control program.

(8) A copy of the technique chart for the x-ray examination procedures to be used.

(9) The qualifications of each individual who will be operating the x-ray system(s).

(10) The qualifications of the individual who will be supervising the operators of the x-ray system(s). The extent of supervision and the method of work performance evaluation shall be specified.

(11) The name and address of the individual who will interpret the radiograph(s).

(12) A description of the procedure to be used in advising the individuals screened and their private practitioners of the healing arts of the results of the screening procedure and any further medical needs indicated.

(13) A description of the procedures for the retention or disposition of the radiographs and other records pertaining to the x-ray examinations.

(14) An indication of the frequency of screening and the duration of the entire screening program.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-225-99930, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-225-99930, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-28-99004, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-28-99004, filed 12/8/80.]

Chapter 246-227 WAC

RADIATION PROTECTION—INDUSTRIAL X-RAY

WAC

246-227-001	Purpose.
246-227-020	Definitions.
246-227-040	Radiation survey instruments.
246-227-050	Utilization and survey records.
246-227-060	Limitations—Personal radiation safety requirements for radiographers and radiographer's assistants.
246-227-070	Operating and emergency procedures.
246-227-080	Personnel monitoring control.
246-227-090	Security—Precautionary procedures in radiographic operations.
246-227-095	Posting.
246-227-120	Other records required.
246-227-130	Special requirements for enclosed radiography.
246-227-150	Special requirements for permanent radiographic installation.
246-227-170	Appendix A—Minimum subjects to be covered in training radiographers.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-227-010	Scope. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-010, filed 12/9/93, effective 1/9/94.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
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WAC 246-227-001 Purpose. The regulations in this chapter establish radiation safety requirements for persons utilizing x-ray machines for industrial radiography. The requirements of this part are in addition to and not in substitution for the other requirements of these regulations.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-001, filed 12/9/93, effective 1/9/94.]

WAC 246-227-020 Definitions. As used in this part:

(1) "Enclosed radiography" means industrial radiography employing radiation machines conducted in an enclosed

cabinet or room and includes cabinet radiography and shielded room radiography.

(a) "Cabinet radiography" means industrial radiography employing radiation machines conducted in an enclosure or cabinet so shielded that every location at the exterior of the enclosure or cabinet meets the condition specified in WAC 246-221-060.

"Cabinet x-ray system" means an x-ray system with the x-ray tube installed in an enclosure (hereinafter termed "cabinet") which, independently of existing architectural structure except the floor on which it may be placed, is intended to contain at least that portion of a material being irradiated, provide radiation attenuation, and exclude personnel from its interior during generation of x-radiation. Included are all x-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad, and bus terminals, and in similar facilities. An x-ray tube used within a shielded part of a building, or x-ray equipment which may temporarily or occasionally incorporate portable shielding is not considered a cabinet x-ray system.

(b) "Shielded-room radiography" means industrial radiography conducted in a room so shielded that every location on the exterior of the room meets the conditions specified in WAC 246-221-060.

(2) "Industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods utilizing x-ray machines. Industrial radiography as used in this chapter does not include well logging operations.

(3) "Permanent radiographic installation" means an installation in which the shielding is an integral part to the building structure, such that the radiographic operations conducted there are not mobile and not temporary.

(4) "Personal supervision" means supervision by a radiographer such that the radiographer is physically present at the radiography site and in such proximity that communication can be maintained and immediate assistance given as required.

(5) "Radiographer" means any individual who performs or who, in attendance at the site where x-ray machines are being used, personally supervises industrial radiographic operations and who is responsible to the registrant for assuring compliance with the requirements of these regulations.

(6) "Radiographer's assistant" means any individual who, under the personal supervision of a radiographer, uses radiation machines, or radiation survey instruments in industrial radiography.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-020, filed 12/9/93, effective 1/9/94.]

WAC 246-227-040 Radiation survey instruments. (1) The registrant shall maintain sufficient calibrated and operable radiation survey instruments to make physical radiation surveys as required by this part and chapter 246-221 WAC. Instrumentation required by this section shall have a range such that two milliroentgens per hour through one roentgen per hour can be measured.

(2) Each radiation survey instrument shall be calibrated:

(a) At energies appropriate for use and at intervals not to exceed three months and after each instrument servicing;

(b) Such that accuracy within \pm twenty percent traceable to a national standard can be demonstrated; and

(c) At two or more widely separated points, other than zero, on each scale.

(3) Records of these calibrations shall be maintained for three years after the most recent calibration date.

(4) The requirements of this section do not apply to registrants using only radiation machines in enclosed radiographic systems.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-040, filed 12/9/93, effective 1/9/94.]

WAC 246-227-050 Utilization and survey records.

(1) Each registrant shall maintain records of the following information for three years after the date of each radiographic operation and shall maintain these records for inspection by the department:

(a) A description (or make and model number) of the radiation machine used along with the techniques utilized for each job;

(b) The identity of the radiographer and radiographer's assistant performing the work;

(c) Locations where used and dates of use;

(d) A physical radiation survey made of the boundary of the restricted area during radiographic operations. The maximum reading at the boundary shall be recorded. The records shall indicate approximate distance from source to boundaries and any occupied areas with exposure levels greater than 2 mR in any hour during radiographic operations; and

(e) The model and serial number of the survey meter used in (d) of this subsection.

(2) The requirements of subsection (1) of this section shall not apply in industrial radiography utilizing radiation machines in enclosed interlocked cabinets or rooms which are not occupied during radiographic operations, which are equipped with interlocks such that the radiation machine will not operate unless all openings are securely closed and which is so shielded that every location on the exterior meets conditions for an unrestricted area, as specified in WAC 246-221-060.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-050, filed 12/9/93, effective 1/9/94.]

WAC 246-227-060 Limitations—Personal radiation safety requirements for radiographers and radiographer's assistants. (1) No registrant shall permit any individual to act as a radiographer as defined in this chapter until such individual:

(a) Has been instructed in the subjects outlined in WAC 246-227-170;

(b) Has received copies of and instruction in the regulations contained in chapters 246-220, 246-222, 246-221 and 246-227 WAC, and the registrant's operating and emergency procedures, and shall have demonstrated understanding thereof;

(c) Has demonstrated competence to use the radiation machine and the radiation survey instruments which will be employed in the individual's assignment; and

(2003 Ed.)

(d) Has demonstrated understanding of the instructions in this paragraph by successful completion of written test or oral test on the subjects covered.

(2) No registrant shall permit any individual to act as a radiographer's assistant as defined in this part until such individual:

(a) Has received copies of an instruction in the registrant's operating and emergency procedures;

(b) Has demonstrated competence to use, under the personal supervision of the radiographer, the radiation survey instruments which will be employed in the individual's assignment;

(c) Has demonstrated understanding of the instructions in this paragraph by successfully completing a written or oral test.

(3) Each registrant shall maintain records of training and testing which demonstrate that the requirements of subsections (1) and (2) of this section are met. These records shall be retained for at least one year following termination of employment.

(4) When a radiographer's assistant is using an x-ray machine, the radiographer shall maintain direct surveillance.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-060, filed 12/9/93, effective 1/9/94.]

WAC 246-227-070 Operating and emergency procedures. The registrant's operating and emergency procedures shall include instructions in at least the following:

(1) The handling and use of radiation machines to be employed such that no individual is likely to be exposed to radiation doses in excess of the limits established in chapter 246-221 WAC;

(2) Methods and occasions for conducting radiation surveys;

(3) Methods for controlling access to radiographic areas;

(4) Methods and occasions for locking or securing radiation machines;

(5) Personnel monitoring and the use of personnel monitoring equipment including steps that must be taken immediately by radiography personnel in the event a pocket dosimeter is found to be off-scale;

(6) The procedure for notifying proper personnel in the event of a theft, loss, overexposure or accident involving a radiation machine; and

(7) Maintenance of records.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-070, filed 12/9/93, effective 1/9/94.]

WAC 246-227-080 Personnel monitoring control. (1) No registrant shall permit any individual to act as a radiographer or as a radiographer's assistant unless, at all times during radiographic operations, each such individual shall wear a film or TLD badge and a direct reading pocket dosimeter. Pocket dosimeters shall be capable of measuring exposures from zero to at least two hundred milliroentgens. A film or TLD badge shall be assigned to and worn by only one individual.

(2) Pocket dosimeters shall be read and doses recorded daily. Pocket dosimeters shall be charged at the beginning of each working day. Pocket dosimeters shall be checked at

least annually for correct response to radiation. Acceptable dosimeters shall read within \pm thirty percent of the true radiation exposure. A film or TLD badge shall be immediately processed if a pocket dosimeter is discharged beyond its range during normal use. The film or TLD badge reports received from the film or TLD badge processor and records of pocket dosimeter readings shall be maintained until the department authorizes their disposal.

(3) The requirements for use of pocket dosimeter or pocket chamber shall not apply in industrial radiography utilizing radiation machines in enclosed interlocked cabinets or rooms which are not occupied during radiographic operations, which are equipped with interlocks such that the radiation machine will not operate unless all openings are securely closed and which are so shielded that every location on the exterior meets conditions for an unrestricted area, as specified in WAC 246-221-060.

(4) The requirement for film badges or TLDs do not apply to those users of cabinet x-ray systems which do not allow human access and which meet the requirements of WAC 246-227-130.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-080, filed 12/9/93, effective 1/9/94.]

WAC 246-227-090 Security—Precautionary procedures in radiographic operations. (1) During each radiographic operation, the radiographer or radiographer's assistant shall maintain a direct surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in chapter 246-220 WAC except:

(a) Where the high radiation area is equipped with a control device or alarm system as described in WAC 246-221-120 (1)(e)(ii); or

(b) Where the high radiation area is locked to protect against unauthorized or accidental entry.

(2) When not in operation or when not under direct surveillance, radiation machines shall be secured to prevent use by unauthorized personnel.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-090, filed 12/9/93, effective 1/9/94.]

WAC 246-227-095 Posting. Notwithstanding any provisions in WAC 246-221-130, areas in which radiography is being performed shall be conspicuously posted and access to the area shall be controlled as required by WAC 246-221-120. This requirement shall not apply to areas using enclosed radiography systems (cabinets) which do not allow human access and in which the requirements of WAC 246-221-060 are met at the surface of the cabinet.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-095, filed 12/9/93, effective 1/9/94.]

WAC 246-227-120 Other records required. Each registrant conducting industrial radiography shall have the following documents, where applicable, available on site for inspection by the department:

- (1) Operating and emergency procedures;
- (2) Applicable regulations;

[Title 246 WAC—p. 314]

(3) Survey records required pursuant to WAC 246-227-050;

(4) Daily pocket dosimeter records for the period of operation at the site pursuant to WAC 246-227-080; and

(5) Proof of the latest calibration for specific instruments in use at the site pursuant to WAC 246-227-040.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-120, filed 12/9/93, effective 1/9/94.]

WAC 246-227-130 Special requirements for enclosed radiography. (1) Shielded room radiography systems and cabinet systems shall:

(a) Comply with all applicable requirements of this chapter and WAC 246-221-060;

(b) Be interlocked such that the exposure will terminate if a door or port accessible to individuals is opened during the exposure, except for those systems employing conveyor belts or sample ports; and

(c) Be tested for the proper operation of interlocks, high radiation area control devices or alarm systems, where applicable, at the beginning of each day of use. The results of these tests shall be recorded and maintained for three years.

(2) The registrant shall perform an evaluation, at intervals not to exceed one year, to determine conformance with this chapter and WAC 246-221-060. Records of each evaluation shall be maintained for three years.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-130, filed 12/9/93, effective 1/9/94.]

WAC 246-227-150 Special requirements for permanent radiographic installation. Permanent radiographic installations having high radiation area entrance controls of the types described in WAC 246-221-102(1) or where the high radiation area is locked to protect against unauthorized or accidental entry, shall also meet the following special requirements:

(1) Each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation to which this section applies shall have both visible and audible warning signals to warn of the presence of radiation. The visible signal shall be actuated by radiation whenever the x-rays are exposed. The audible signal shall be actuated when an attempt is made to enter the installation while x-rays are being generated.

(2) Both visible and audible alarm systems are required and shall be tested prior to the first use of a source in the installation and thereafter at intervals not to exceed three months. Records of the tests shall be kept for three years.

(3) The department shall review and approve, in advance of construction, plans for permanent radiographic installations whose construction had not commenced by the effective date of these regulations. Construction of the permanent facility shall be in accordance with the plans approved by the department.

(4) A physical radiation survey shall be conducted and results recorded following construction or major modification of the facility to be used in the installation. Radiography shall not be conducted if exposure levels in unrestricted areas are greater than 2mR in any hour. Any increase in output

(2003 Ed.)

capability of radiation machines will require resurvey of the installation prior to the conduct of industrial radiography.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-150, filed 12/9/93, effective 1/9/94.]

WAC 246-227-170 Appendix A—Minimum subjects to be covered in training radiographers. (1) Fundamentals of radiation safety:

- (a) Characteristics of ionizing radiation;
- (b) Units of radiation dose (mrem) and quantity of radioactivity (curie);
- (c) Hazards of exposure to radiation:
 - (i) Radiation protection standards;
 - (ii) Biological effects of radiation dose;
- (d) Levels of radiation from x-ray machines;
- (e) Methods of controlling radiation dose:
 - (i) Working time;
 - (ii) Working distances;
 - (iii) Shielding.
- (2) Radiation detection instrumentation to be used:
 - (a) Use of radiation survey instruments:
 - (i) Operation;
 - (ii) Calibration;
 - (iii) Limitations;
 - (b) Survey techniques;
 - (c) Use of personnel monitoring equipment:
 - (i) Film badges;
 - (ii) Pocket dosimeters;
 - (iii) Thermoluminescent dosimeters.
- (3) Operation and control of x-ray equipment.
- (4) The requirements of pertinent federal and state regulations.
- (5) The registrant's written operating and emergency procedures.
- (6) Case histories of radiography accidents.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-227-170, filed 12/9/93, effective 1/9/94.]

Chapter 246-228 WAC

RADIATION PROTECTION—ANALYTICAL X-RAY EQUIPMENT

WAC

246-228-001	Purpose and scope.
246-228-010	Definitions.
246-228-020	Equipment requirements.
246-228-030	Facility requirements.
246-228-040	Operating requirements.
246-228-050	Personnel requirements.

WAC 246-228-001 Purpose and scope. This chapter provides special requirements for analytical x-ray equipment. The requirements of this chapter are in addition to, and not in substitution for, applicable requirements in other chapters of these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-001, filed 12/27/90, effective 1/31/91; Order 1084, § 402-40-010, filed 1/14/76.]

(2003 Ed.)

WAC 246-228-010 Definitions. (1) "Analytical x-ray equipment" means equipment used for x-ray diffraction or fluorescence analysis.

(2) "Analytical x-ray system" means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials.

(3) "Fail-safe characteristics" mean a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.

(4) "Local components" mean parts of an analytical x-ray system and include areas that are struck by x-rays such as radiation source housings, ports and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors, and shielding, but do not include power supplies, transformers, amplifiers, readout devices, and control panels.

(5) "Normal operating procedures" mean step-by-step instructions necessary to accomplish the analysis. These procedures shall include sample insertion and manipulation, equipment alignment, routine maintenance by the registrant, and data recording procedures which are related to radiation safety.

(6) "Open-beam configuration" means a mode of operation of an analytical x-ray system in which an individual could accidentally place some part of their body into the primary beam during normal operation if no further safety devices are incorporated.

(7) "Primary beam" means ionizing radiation which passes through an aperture of the source housing via a direct path from the x-ray tube located in the radiation source housing.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-40-020, filed 12/8/80; Order 1084, § 402-40-020, filed 1/14/76.]

WAC 246-228-020 Equipment requirements. (1) *Safety device.* A device which prevents the entry of any portion of an individual's body into the primary x-ray beam path, or which causes the beam to be shut off upon entry into its path, shall be provided for all open-beam configurations. A registrant or licensee may apply to the department for an exemption from the requirement of a safety device. Such application shall include:

(a) A description of the various safety devices that have been evaluated;

(b) The reason each of these devices cannot be used; and

(c) A description of the alternative methods that will be employed to minimize the possibility of an accidental exposure, including procedures to assure that operators and others in the area will be informed of the absence of safety devices.

(2) *Warning devices.* Open-beam configurations shall be provided with a readily discernible indication of:

(a) X-ray tube status (ON-OFF) located near the radiation source housing, if the primary beam is controlled in this manner and at or near the port and/or

(b) Shutter status (OPEN-CLOSED) located near each port on the radiation source housing, if the primary beam is controlled in this manner.

[Title 246 WAC—p. 315]

(c) Warning devices shall be labeled so that their purpose is easily identified and the devices shall be conspicuous at the beam port. On new equipment installed after January 1, 1976, warning devices shall have fail-safe characteristics.

(3) *Ports.* Unused ports on radiation source housings shall be secured in the closed position in a manner which will prevent casual opening. Such security requirement will be deemed met if the beam port cannot be opened without the use of tools not part of the closure for units installed after January 1, 1981.

(4) *Labeling.* All analytical x-ray equipment shall be labeled with a readily discernible sign or signs bearing the radiation symbol and the words:

(a) "CAUTION - HIGH INTENSITY X-RAY BEAM," or words having a similar intent, on the x-ray source housing; and

(b) "CAUTION RADIATION - THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED," or words having a similar intent, near any switch that energizes an x-ray tube if the radiation source is an x-ray tube; or

(c) "CAUTION - RADIOACTIVE MATERIAL," or words having a similar intent, on the source housing if the radiation source is a radionuclide.

(5) *Shutters.* On new equipment employing open-beam configurations installed after January 1, 1981, each port on the radiation source housing shall be equipped with a shutter that cannot be opened unless a collimator or a coupling has been connected to the port.

(6) *Warning lights.* An easily visible warning light labeled with the words "X-RAY ON," or words having a similar intent, shall be located:

(a) Near any switch that energizes an x-ray tube and near any x-ray port and shall be illuminated only when the tube is energized; or

(b) In the case of a radioactive source, near any switch that opens a housing shutter, and shall be illuminated only when the shutter is open.

(c) On equipment installed after January 1, 1981, warning lights shall have fail-safe characteristics.

(7) *Radiation source housing.* Each x-ray tube housing shall be so constructed that with all shutters closed the leakage radiation measured at a distance of 5 cm from its surface is not capable of producing a dose equivalent in excess of 2.5 mrem in one hour at any specified tube rating. If radioactive sources are used, corresponding dose limits shall not exceed 2.5 mrem per hour.

(8) *Generator cabinet.* Each x-ray generator shall be supplied with a protective cabinet which limits leakage radiation measured at a distance of 5 cm from its surface such that it is not capable of producing a dose equivalent in excess of 0.25 mrem in one hour.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-228-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-40-030, filed 12/8/80; Order 1084, § 402-40-030, filed 1/14/76.]

WAC 246-228-030 Facility requirements. (1) *Radiation levels.* The local components of an analytical x-ray system shall be located and arranged and shall include sufficient shielding or access control such that no radiation levels exist in any area surrounding the local component group which

could result in a dose to an individual present therein in excess of the dose equivalent limits given in WAC 246-221-060 of these regulations. For systems utilizing x-ray tubes, these levels shall be met at any specified tube rating.

(2) *Surveys.* Radiation surveys, as required by WAC 246-221-110 of all analytical x-ray systems, sufficient to show compliance with WAC 246-228-030(1), shall be performed:

(a) Upon installation of the equipment, and at least once every twelve months thereafter;

(b) Following any change in the initial arrangement, number, or type of local components in the system;

(c) Following any maintenance requiring the disassembly or removal of a local component in the system;

(d) During the performance of maintenance and alignment procedures if the procedures require the presence of a primary x-ray beam when any local component in the system is disassembled or removed;

(e) Any time a visual inspection of the local components in the system reveals an abnormal condition; and

(f) Whenever personnel monitoring devices required in WAC 246-228-050(2) show a significant increase over the previous monitoring period or the readings are approaching 1/10 of the hands and forearm limit specified in WAC 246-221-010.

(g) Radiation survey measurements shall not be required if a registrant or licensee can demonstrate compliance to the satisfaction of the department with WAC 246-228-030(1) in some other manner.

(3) *Posting.* Each area or room containing analytical x-ray equipment shall be conspicuously posted with a sign or signs bearing the radiation symbol and the words "CAUTION - X-RAY EQUIPMENT," or words having a similar intent.

(4) *Documentation of instruction.* Each facility shall maintain written documentation showing that compliance with WAC 246-228-050 has been met, and shall make such documentation available to the department upon request.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-083 (Order 183), § 246-228-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-228-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-40-040, filed 12/8/80; Order 1084, § 402-40-040, filed 1/14/76.]

WAC 246-228-040 Operating requirements. (1) *Procedures.* Routine operating procedures shall be written and available to all analytical x-ray equipment workers. No person shall be permitted to operate analytical x-ray equipment in any manner other than that specified in the procedures unless such person has obtained written approval of the radiation safety officer.

(2) *Bypassing.* No person shall bypass a safety device unless such person has obtained the written approval of the radiation safety officer. Such approval shall be for a specified period of time. When a safety device has been bypassed, a readily discernible sign bearing the words "SAFETY DEVICE NOT WORKING," or words having a similar intent, shall be placed on the radiation source housing. The requirements set forth in WAC 246-228-020(1) shall also be met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-228-040, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-40-050, filed 12/8/80; Order 1084, § 402-40-050, filed 1/14/76.]

WAC 246-228-050 Personnel requirements. (1)

Instruction. No person shall be permitted to operate or maintain analytical x-ray equipment unless such person has received instruction in and demonstrated competence as to:

- (a) Identification of radiation hazards associated with the use of the equipment;
- (b) Significance of the various radiation warning and safety devices incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in such cases;
- (c) Proper operating procedures for the equipment;
- (d) Symptoms of an acute localized exposure; and
- (e) Proper procedures for reporting an actual or suspected exposure.

(2) *Personnel monitoring.* Finger or wrist dosimetric devices shall be provided to and shall be used by:

(a) Analytical x-ray equipment workers using systems having an open-beam configuration and not equipped with a safety device; and

(b) Personnel maintaining analytical x-ray equipment if the maintenance procedures require the presence of a primary x-ray beam when any local component in the analytical x-ray system is disassembled or removed.

(c) Reported dose values shall not be used for the purpose of determining compliance with WAC 246-221-010 of these regulations unless evaluated by a qualified expert.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-228-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-228-050, filed 12/27/90, effective 1/31/91; Order 1084, § 402-40-060, filed 1/14/76.]

Chapter 246-229 WAC

RADIATION PROTECTION—PARTICLE ACCELERATORS

WAC

246-229-0001	Purpose.
246-229-0010	Definitions.
246-229-0020	How do I get approval for particle accelerator installation and use?
246-229-0030	What are the training requirements for particle accelerator use?
246-229-0040	Are there other requirements that apply to the use of particle accelerators?
246-229-0050	Who is authorized to terminate a registrant's use of a particle accelerator?
246-229-0060	What are the minimum requirements for particle accelerator installation?
246-229-0070	What are the minimum requirements for operating and emergency procedure documentation?
246-229-0080	What are the requirements for bypassing safety interlocks?
246-229-0090	What are the minimum requirements for particle accelerator use?
246-229-0100	What are the recordkeeping requirements for particle accelerator use?

(2003 Ed.)

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-229-001	Purpose and scope. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-001, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-010, filed 12/8/80; Order 1084, § 402-44-010, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-010	Registration requirements. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-010, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-010, filed 12/27/90, effective 1/31/91; Order 1084, § 402-44-020, filed 1/14/76.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-229-020	General requirements for the issuance of a registration for particle accelerators. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-020, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-030, filed 12/8/80; Order 1084, § 402-44-030, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-030	Human use of particle accelerators. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-030, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-040, filed 12/8/80; Order 1084, § 402-44-040, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-040	General provisions. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-050, filed 12/8/80; Order 1084, § 402-44-050, filed 1/14/76.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-229-050	Limitations. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-050, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-060, filed 12/8/80; Order 1084, § 402-44-060, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-060	Shielding and safety design requirements. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-060, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-070, filed 12/8/80; Order 1084, § 402-44-070, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-070	Particle accelerator controls and interlock systems. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-080, filed 12/8/80; Order 1084, § 402-44-080, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
246-229-080	Warning devices. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-080, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-

[Title 246 WAC—p. 317]

- 011 (Order 1570), § 402-44-090, filed 12/8/80; Order 1084, § 402-44-090, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
- 246-229-090 Operating procedures. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-090, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-100, filed 12/8/80; Order 1084, § 402-44-100, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
- 246-229-100 Radiation monitoring requirements. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-110, filed 12/8/80; Order 1084, § 402-44-110, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.
- 246-229-110 Ventilation systems. [Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-083 (Order 183), § 246-229-110, filed 7/23/91, effective 8/23/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-229-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-44-120, filed 12/11/86. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-44-120, filed 12/8/80; Order 1084, § 402-44-120, filed 1/14/76.] Repealed by 02-14-050, filed 6/27/02, effective 7/28/02. Statutory Authority: RCW 70.98.050 and [70.98.]080.

WAC 246-229-0001 Purpose. The purpose of this chapter is to regulate certain sources of ionizing radiation as required by RCW 70.98.050 and 70.98.080. This chapter provides for the registration and use of all particle accelerators installed and/or used in Washington state.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0001, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0010 Definitions. "Department" means the department of health.

"High radiation area" means any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 1 mSv (100 mrem) in one hour at 30 centimeters from any source of radiation or from any surface that the radiation penetrates. For purposes of these regulations, rooms or areas in which diagnostic x-ray systems are used for healing arts purposes are not considered high radiation areas.

"Particle accelerator" means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV.

"Qualified expert" means an individual who has demonstrated to the satisfaction of the department that he or she is knowledgeable, trained, and/or experienced to measure ionizing radiation, evaluate safety techniques, and/or advise appropriately on matters of radiation protection. The department reserves the right to recognize qualifications in specific areas of radiation protection.

"Radiation machine" means any device capable of producing ionizing radiation except those devices with radioactive materials as the only source of radiation.

"Radiation safety committee" means a registrant-appointed committee of at least three members to evaluate and approve all proposals for research, diagnostic, and therapeutic use of a particle accelerator. Committee members should include, at a minimum, persons with expertise related to the intended use of the accelerator, and a person experienced in depth dose calculations and radiation safety.

"Radiation safety officer" means a knowledgeable and responsible person assigned by the registrant who provides radiation protection expertise to facilities and users of radiation machines.

"Radioactive material" means any material that emits radiation energy spontaneously. A machine that emits x-rays is not considered a radioactive material.

"Registrant" means an owner or controller of a radiation machine who is responsible for the safe operation of the radiation machine.

"Restricted area" means any area with limited access for the purposes of protecting individuals from undue risks of radiation exposure. A restricted area cannot be a residential area; a building may contain both restricted areas and residential areas.

"Unrestricted area" means any area freely available to the public, workers, or other persons; and where a person may receive less than 1 mSv (100 mrem) per year or be subject to any dose rate less than 20 µSv/hr (2 mrem/hr).

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0010, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0020 How do I get approval for particle accelerator installation and use? (1) Anyone installing or using particle accelerators in Washington state must get department approval by registering with the department according to chapter 246-224 WAC, Radiation protection—Radiation machine assembly and registration, prior to installation or use of the particle accelerator.

- (2) A registrant must submit the following information:
- (a) A membership list showing the establishment of a radiation safety committee;
 - (b) An identified radiation safety officer;
 - (c) A qualified expert's radiation shielding and safety plan review for approval according to chapter 246-225 WAC, Radiation protection—X-rays in the healing arts; and
 - (d) Operating and emergency procedures.
- (3) If the particle accelerator is intended for human use:
- (a) The designated user must be a physician with training and experience in deep therapy techniques or in the use of particle accelerators to treat humans; and
 - (b) The registrant must appoint a radiation safety committee.

(4) To submit registration and questions, contact the department by phone or mail at:

Washington State Health Department
Division of Radiation Protection
Attn: X-Ray Registration
P.O. Box 47827
Olympia, WA 98504-7827
360-236-3230 or 1-800-299-XRAY

- (5) A facility may not operate a particle accelerator:
- (a) Without approval from the department; and

(b) If any applicable requirement in this chapter is not met.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0020, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0030 What are the training requirements for particle accelerator use? (1) The registrant must:

(a) Ensure training for operators to use the particle accelerator that meets the requirements of subsection (2) of this section; and

(b) Maintain training records that demonstrate compliance with the requirements of subsection (2) of this section for two years after the last employment or operation date for the operator.

(2) At a minimum, operators must:

(a) Demonstrate radiation safety expertise and other skills required by the facility training program;

(b) Understand applicable requirements and the registrant's operating and emergency procedures; and

(c) Demonstrate competence to use the particle accelerator, related equipment, and survey instruments, which are required by the operator's assignment.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0030, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0040 Are there other requirements that apply to the use of particle accelerators? (1) Registrants must meet the radiation standards of chapter 246-220 WAC, Radiation protection—General provisions; chapter 246-221 WAC, Radiation protection standards; and chapter 246-222 WAC, Radiation protection—Worker rights; for public, operator, and user protection.

(2) Depending on the installation, type of machine, and intended use, registrants may also need to meet:

(a) Industrial radiographic operations, chapters 246-243 and 246-227 WAC;

(b) X-ray in the healing arts, chapter 246-225 WAC; and

(c) Medical therapy, chapter 246-240 WAC.

(3) Registrants using particle accelerators to produce radioactive material must meet the requirements of chapter 246-232 WAC, Radioactive material—Licensing applicability; and chapter 246-235 WAC, Radioactive materials—Specific licenses.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0040, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0050 Who is authorized to terminate a registrant's use of a particle accelerator? The radiation safety committee, the radiation safety officer of the facility, and the department are authorized to terminate the particle accelerator operations at a facility if the action is determined necessary to protect health and minimize danger to public health and safety or property.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0050, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0060 What are the minimum requirements for particle accelerator installation? (1) Shielding and safety design. The installation must include:

(2003 Ed.)

(a) Primary and secondary radiation barriers to comply with the radiation protection standards of WAC 246-221-010 and 246-221-060.

(b) If necessary, a ventilation system designed to limit exposure to airborne radioactive materials as follows:

(i) For restricted areas, limits are specified in WAC 246-221-040;

(ii) For unrestricted areas, limits are specified in WAC 246-221-070; and/or

(iii) For unrestricted areas, the facility must prohibit releases, venting, or otherwise discharging airborne radioactive material which exceeds the limits of WAC 246-247-040 or 246-221-290 Appendix A - Table II, unless authorized in WAC 246-221-180 or 246-221-070(2). To calculate, concentrations may be averaged over a period not greater than one year. Every reasonable effort should be made to prohibit releases of radioactive material to unrestricted areas.

(2) Controls, instrumentation, and readouts. All controls, instrumentation, and readouts must be clearly identified and functional on the particle accelerator control console.

(3) Safety interlocks. All entrances into a target room or other high radiation area must have interlocks that shut down the machine if a door is opened (e.g., barrier penetrated) during irradiation.

(a) Manual reset. If the interlock engages (shuts the machine off), the machine must stay off until manually reset at the console.

(b) Independent function. Each safety interlock must function independently of any other safety interlocks.

(c) Failsafe. All safety interlocks must ensure that any defect or component failure in the interlock system prevents operation of the accelerator.

(4) Emergency power cutoff switch system. An identifiable "scram" button or emergency power cutoff switch which stops irradiation must exist in all high radiation areas. If the switch is engaged (shuts off the machine), the system must prohibit the accelerator from restarting until the switch in the room is reset and the main console restarted manually. Use of this system is limited to emergency situations.

(5) High radiation area warning devices. For areas designated as high radiation areas, the registrant must:

(a) Identify barriers (including temporary) for and pathways to high radiation areas according to WAC 246-221-120, Caution signs and labels.

(b) Except inside treatment rooms in facilities designed for human exposure, install easily observable warning lights at area entrances that activate when radiation is being produced.

(c) Except in facilities designed for human exposure, install an audible warning device which activates for fifteen seconds prior to accelerator use in all high radiation areas. Instruct all personnel in the area as to the signal's meaning.

(d) Except in facilities designed for human exposure, install continuous radiation detection monitoring equipment. The equipment must be electrically independent of the accelerator control and interlock systems and be calibrated every six months at a minimum. The equipment must provide:

(i) A remote and local readout; and

[Title 246 WAC—p. 319]

(ii) Visual and/or audible alarms at the control panel, entrances to high radiation areas, and other appropriate locations.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0060, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0070 What are the minimum requirements for operating and emergency procedure documentation? At a minimum, the procedures must include instruction on:

- (1) Securing the accelerator to prevent unauthorized use.
- (2) Operating the accelerator.
- (3) Responding to an emergency involving the accelerator.
- (4) Performing safety and warning device (including interlocks) checks at least every three months.
- (5) Performing radiation surveys.
- (6) Performing monitoring equipment calibration (if applicable).
- (7) Recordkeeping and/or documentation.
- (8) Bypassing safety interlocks.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0070, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0080 What are the requirements for bypassing safety interlocks? Bypassing a safety interlock or interlocks is allowed only if:

- (1) Authorized by the radiation safety committee and/or radiation safety officer;
- (2) Recorded in a permanent log and a notice posted at the accelerator control console; and
- (3) The bypass procedure is terminated as soon as possible.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0080, filed 6/27/02, effective 7/28/02.]

WAC 246-229-0090 What are the minimum requirements for particle accelerator use? The minimum requirements for the registrant to use a particle accelerator are to:

- (1) Register the accelerator with the department;
- (2) Submit plan review/shielding design to the department and receive written approval;
- (3) Train operators and users;
- (4) Complete a qualified expert's radiation protection survey of the room/area initially and after any changes in shielding, equipment, or occupancy of adjacent areas;
- (5) Provide appropriate portable radiation monitoring equipment that is operable and tested daily, and calibrated every six months, or after any service/repair;
- (6) Develop operating and emergency procedures and keep a copy of the current procedures at the accelerator control panel; and
- (7) If applicable, provide the means and guidance to determine airborne particulate radioactivity present in areas of airborne hazards, and/or particulate radiation contamination (smear surveys) in target and other pertinent areas.

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0090, filed 6/27/02, effective 7/28/02.]

[Title 246 WAC—p. 320]

WAC 246-229-0100 What are the recordkeeping requirements for particle accelerator use?

Records	Retention time
Operator training and qualifications	Two years past last employment/operation
Safety and warning device checks	Two years
Area radiation monitors	Two years (if necessary)
Instrumentation tests	Two years
Smear results	Two years (if necessary)
Qualified expert radiation protection surveys	Life of the accelerator
Electrical circuit diagrams	Life of the accelerator
Permanent log of bypassing interlocks	Life of the accelerator

[Statutory Authority: RCW 70.98.050 and [70.98.]080. 02-14-050, § 246-229-0100, filed 6/27/02, effective 7/28/02.]

Chapter 246-231 WAC PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

WAC

APPENDIX A—DETERMINATION OF A1 AND A2

246-231-001	Purpose and scope.
246-231-005	Requirement for license.
246-231-010	Definitions.
246-231-030	Transportation of licensed material.
246-231-040	Exemptions.
246-231-050	General licenses for carriers.
246-231-060	General license—NRC-approved package.
246-231-070	Previously approved package.
246-231-080	General license—DOT specification container.
246-231-090	General license—Use of foreign approved package.
246-231-100	Applicability of operating controls and procedures.
246-231-110	Routine determinations.
246-231-120	Air transport of plutonium.
246-231-130	Opening instructions.
246-231-140	Advance notification of shipment of irradiated reactor fuel and nuclear waste.
246-231-200	Appendix A—Determination of A1 and A2.

APPENDIX A—DETERMINATION OF A1 AND A2

WAC 246-231-001 Purpose and scope. (1) This chapter establishes requirements for packaging, preparation for shipment, and transportation of radioactive material.

(2) These rules are in addition to applicable requirements of the United States Nuclear Regulatory Commission (NRC), the United States Department of Transportation (DOT), the U.S. Postal Service¹, and other requirements of Title 246 WAC.

(3) The regulations in this chapter apply to any licensee authorized by specific or general license issued by the department to receive, possess, use, or transfer licensed material, if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the license, or transports that material on public highways. No provision of this chapter authorizes possession of licensed material.

¹ *Postal Service Manual (Domestic Mail Manual)*, section 124.3, which is incorporated by reference at 39 CFR 111.1.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-001, filed 7/21/99, effective 8/21/99.]

WAC 246-231-005 Requirement for license. No person shall deliver radioactive material to a carrier for transport or transport radioactive material except as authorized in a general or specific license issued by the department, or as exempted in this chapter.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-005, filed 7/21/99, effective 8/21/99.]

WAC 246-231-010 Definitions. The following terms are as defined here for the purpose of this chapter. To ensure compatibility with international transportation standards, all limits in this chapter are given in terms of dual units: The International System of Units (SI) followed or preceded by U.S. standard or customary units. The U.S. customary units are not exact equivalents, but are rounded to a convenient value, providing a functionally equivalent unit. For the purpose of this chapter, either unit may be used.

(1) "A1" means the maximum activity of special form radioactive material permitted in a Type A package.

(2) "A2" means the maximum activity of radioactive material, other than special form, LSA and SCO material, permitted in a Type A package. These values are either listed in WAC 246-231-200, Table A-1, or may be derived in accordance with the procedure prescribed in WAC 246-231-200.

(3) "Carrier" means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

(4) "Certificate holder" means a person who has been issued a certificate of compliance or other package approval by the U.S. Nuclear Regulatory Commission (USNRC).

(5) "Close reflection by water" means immediate contact by water of sufficient thickness for maximum reflection of neutrons.

(6) "Containment system" means the assembly of components of the packaging intended to retain the radioactive material during transport.

(7) "Conveyance" means:

(a) For transport by public highway or rail any transport vehicle or large freight container;

(b) For transport by water any vessel, or any hold, compartment, or defined deck area of a vessel including any transport vehicle on board the vessel; and

(c) For transport by aircraft any aircraft.

(8) "Exclusive use" means the sole use by a single consignor of a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. The consignor and the carrier must ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. The consignor must issue specific instructions, in writing, for maintenance of exclusive use shipment controls, and include them with the shipping paper information provided to the carrier by the consignor.

(9) "Fissile material" means plutonium-238, plutonium-239, plutonium-241, uranium-233, uranium-235, or any com-

bination of these radionuclides. Unirradiated natural uranium and depleted uranium, and natural uranium or depleted uranium that has been irradiated in thermal reactors only are not included in this definition. Certain exclusions from fissile material controls are provided in USNRC regulations 10 CFR 71.53.

(10) "Highway route controlled quantity" means a quantity within a single package which exceeds:

(a) 3,000 times the A1 or A2 quantity specified in WAC 246-231-200; or

(b) 1,000 TBq (27,000 Ci) whichever is least.

(11) "Licensed material" means radioactive material received, possessed, used, or transferred under a general or specific license issued by the department pursuant to the regulations in this chapter.

(12) "Low specific activity (LSA) material" means radioactive material with limited specific activity that satisfies the descriptions and limits set forth below. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. LSA material must be in one of three groups:

(a) LSA-I.

(i) Ores containing only naturally occurring radionuclides (e.g., uranium, thorium) and uranium or thorium concentrates of such ores; or

(ii) Solid unirradiated natural uranium or depleted uranium or natural thorium or their solid or liquid compounds or mixtures; or

(iii) Radioactive material, other than fissile material, for which the A2 value is unlimited; or

(iv) Mill tailings, contaminated earth, concrete, rubble, other debris, and activated material in which the radioactive material is essentially uniformly distributed, and the average specific activity does not exceed $1E-6$ A2/g.

(b) LSA-II.

(i) Water with tritium concentration up to 0.8 TBq/liter (20.0 Ci/liter); or

(ii) Material in which the radioactive material is distributed throughout, and the average specific activity does not exceed $1E-4$ A2/g for solids and gases, and $1E-5$ A2/g for liquids.

(c) LSA-III. Solids (e.g., consolidated wastes, activated materials) in which:

(i) The radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.); and

(ii) The radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble material, so that, even under loss of packaging, the loss of radioactive material per package by leaching, when placed in water for seven days, would not exceed 0.1 A2; and

(iii) The average specific activity of the solid does not exceed $2E-3$ A2/g.

(13) "Low toxicity alpha emitters" means natural uranium, depleted uranium, natural thorium; uranium-235, uranium-238, thorium-232, thorium-228 or thorium-230 when contained in ores or physical or chemical concentrates or tailings; or alpha emitters with a half-life of less than ten days.

(14) "Maximum normal operating pressure" means the maximum gauge pressure that would develop in the containment system in a period of one year under the heat condition specified in USNRC regulations Title 10 CFR 71.71 (c)(1), in the absence of venting, external cooling by an ancillary system, or operational controls during transport.

(15) "Natural thorium" means thorium with the naturally occurring distribution of thorium isotopes (essentially 100 weight percent thorium-232).

(16) "Normal form radioactive material" means radioactive material that has not been demonstrated to qualify as "special form radioactive material."

(17) "Nuclear waste" as used in WAC 246-231-140 means any quantity of radioactive material (not including radiography sources being returned to the manufacturer) required to be in Type B packaging while transported to, through, or across state boundaries to a disposal site, or to a collection point for transport to a disposal site. Nuclear waste, as used in these regulations, is a special classification of radioactive waste.

(18) "Optimum interspersed hydrogenous moderation" means the presence of hydrogenous material between packages to such an extent that the maximum nuclear reactivity results.

(19) "Package" means the packaging together with its radioactive contents as presented for transport.

(a) "Fissile material package" means a fissile material packaging together with its fissile material contents.

(b) "Type B package" means a Type B packaging together with its radioactive contents. On approval by the NRC, a Type B package design is designated as B(U) unless the package has a maximum normal operating pressure of more than 700 kPa (100 lb/in²) gauge or a pressure relief device that would allow the release of radioactive material to the environment under the tests specified in USNRC regulations Title 10 CFR 71.73 (hypothetical accident conditions), in which case it will receive a designation B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval of international shipments. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, see DOT regulations in 49 CFR Part 173. A Type B package approved before September 6, 1983, was designated only as Type B. Limitations on its use are specified in WAC 246-231-070.

(20) "Packaging" means the assembly of components necessary to ensure compliance with the packaging requirements of this chapter. It may consist of one or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The vehicle, tie-down system, and auxiliary equipment may be designated as part of the packaging.

(21) "Special form radioactive material" means radioactive material that satisfies the following conditions:

(a) It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

(b) The piece or capsule has at least one dimension not less than 5 mm (0.2 in); and

(c) It satisfies the requirements of USNRC regulations. A special form encapsulation designed in accordance with the USNRC requirements in effect on June 30, 1983, (see 10 CFR Part 71, revised as of January 1, 1983), and constructed before July 1, 1985, and a special form encapsulation designed in accordance with the requirements of the USNRC in effect on March 31, 1996, (see 10 CFR Part 71, revised as of January 1, 1983), and constructed before April 1, 1998, may continue to be used. Any other special form encapsulation must meet the specifications of this definition.

(22) "Specific activity" of a radionuclide means the radioactivity of the radionuclide per unit mass of that nuclide. The specific activity of a material in which the radionuclide is essentially uniformly distributed is the radioactivity per unit mass of the material.

(23) "State" means a state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(24) "Surface contaminated object (SCO)" means a solid object that is not itself classed as radioactive material, but which has radioactive material distributed on any of its surfaces. SCO must be in one of two groups with surface activity not exceeding the following limits:

(a) SCO-I: A solid object on which:

(i) The nonfixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4 Bq/cm² (1E-4 microcurie/cm²) for beta and gamma and low toxicity alpha emitters, or 0.4 Bq/cm² (1E-5 microcurie/cm²) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4E+4 Bq/cm² (1.0 microcurie/cm²) for beta and gamma and low toxicity alpha emitters, or 4E+3 Bq/cm² (0.1 microcurie/cm²) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4E+4 Bq/cm² (1 microcurie/cm²) for beta and gamma and low toxicity alpha emitters, or 4E+3 Bq/cm² (0.1 microcurie/cm²) for all other alpha emitters.

(b) SCO-II: A solid object on which the limits for SCO-I are exceeded and on which:

(i) The nonfixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 400 Bq/cm² (1E-2 microcurie/cm²) for beta and gamma and low toxicity alpha emitters or 40 Bq/cm² (1E-3 microcurie/cm²) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8E+5 Bq/cm² (20 microcuries/cm²) for beta and gamma and low toxicity alpha emitters, or 8E+4 Bq/cm² (2 microcuries/cm²) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8E+5 Bq/cm² (20 microcuries/cm²) for beta and gamma and low toxicity alpha emitters, or 8E+4 Bq/cm² (2 microcuries/cm²) for all other alpha emitters.

(25) "Transport index" means the dimensionless number (rounded up to the next tenth) placed on the label of a package, to designate the degree of control to be exercised by the carrier during transportation. The transport index is determined as follows:

(a) For nonfissile material packages, the number determined by multiplying the maximum radiation level in millisievert (mSv) per hour at one meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at one meter (3.3 ft)); or

(b) For fissile material packages, the number determined by multiplying the maximum radiation level in millisievert per hour at one meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at one meter (3.3 ft)), or, for criticality control purposes, the number obtained as described in USNRC regulations 10 CFR 71.59, whichever is larger.

(26) "Type A quantity" means a quantity of radioactive material, the aggregate radioactivity of which does not exceed A1 for special form radioactive material, or A2, for normal form radioactive material, where A1 and A2 are given in Table A-1 of WAC 246-231-200, or may be determined by procedures described in WAC 246-231-200.

(27) "Type B quantity" means a quantity of radioactive material greater than a Type A quantity.

(28) Uranium—natural, depleted, enriched.

(a) "Natural uranium" means uranium with the naturally occurring distribution of uranium isotopes (approximately 0.711 weight percent uranium-235, and the remainder by weight essentially uranium-238).

(b) "Depleted uranium" means uranium containing less uranium-235 than the naturally occurring distribution of uranium isotopes.

(c) "Enriched uranium" means uranium containing more uranium-235 than the naturally occurring distribution of uranium isotopes.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-010, filed 7/21/99, effective 8/21/99.]

WAC 246-231-030 Transportation of licensed material. (1) Each licensee who transports licensed material outside the site of usage, as specified in the license issued by the department, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 170 through 189 appropriate to the mode of transport.

(a) The licensee shall particularly note DOT regulations in the following areas:

(i) Packaging—49 CFR Part 173: Subparts A and B and I.

(ii) Marking and labeling—49 CFR Part 172: Subpart D, Secs. 172.400 through 172.407, Secs. 172.436 through 172.440, and subpart E.

(iii) Placarding—49 CFR Part 172: Subpart F, especially Secs. 172.500 through 172.519, 172.556, and appendices B and C.

(iv) Accident reporting—49 CFR Part 171: Secs. 171.15 and 171.16.

(2003 Ed.)

(v) Shipping papers and emergency information—49 CFR Part 172: Subparts C and G.

(vi) Hazardous material employee training—49 CFR Part 172: Subpart H.

(vii) Hazardous material shipper/carrier registration—49 CFR Part 107: Subpart G.

(b) The licensee shall also note DOT regulations pertaining to the following modes of transportation:

(i) Rail—49 CFR Part 174: Subparts A through D and K.

(ii) Air—49 CFR Part 175.

(iii) Vessel—49 CFR Part 176: Subparts A through F and M.

(iv) Public Highway—49 CFR Part 177 and Parts 390 through 397.

(2) If DOT regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of the DOT specified in paragraph (1) of this section to the same extent as if the shipment or transportation were subject to DOT regulations. A request for modification, waiver, or exemption from those requirements, and any notification referred to in those requirements, must be filed with, or made to, the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-030, filed 7/21/99, effective 8/21/99.]

WAC 246-231-040 Exemptions. (1) Common and contract carriers, freight forwarders, and warehouse workers who are subject to the rules and regulations of the United States Department of Transportation (49 CFR Parts 170 through 189) or the United States Postal Service (Domestic Mail Manual, Section 124.3 incorporated by reference, 39 CFR 111.11 (1974) are exempt from this chapter to the extent that they transport or store radioactive material in the regular course of their carriage for another or storage incident thereto. Common and contract carriers who are not subject to the rules and regulations of the United States Department of Transportation or United States Postal Service are subject to WAC 246-231-005 and other applicable sections of these regulations.

(2) Any licensee who delivers radioactive material to a carrier for transport, where such transport is subject to the regulations of the United States Postal Service, is exempt from the provisions of WAC 246-231-005.

(3) Physicians as defined in WAC 246-220-010, are exempt from the requirements of this chapter only to the extent that they transport radioactive material for emergency use in the practice of medicine.

(4) A licensee is exempt from all requirements of this chapter with respect to shipment or carriage of a package containing radioactive material having a specific activity not greater than 70 Bq/g (0.002 uCi/g).

(5) A licensee is exempt from all requirements of this chapter, other than WAC 246-231-030 and 246-231-120, with respect to shipment or carriage of the following packages, provided the packages contain no fissile material:

(a) A package containing no more than a Type A quantity of radioactive material;

[Title 246 WAC—p. 323]

(b) A package in which the only radioactive material is low specific activity (LSA) material or surface contaminated objects (SCO), provided the external radiation level at 3 m from the unshielded material or objects does not exceed 10 mSv/h (1 rem/h); or

(c) A package transported within locations within the United States which contains only americium or plutonium in special form with an aggregate radioactivity not to exceed 20 curies.

(6) A licensee is exempt from all requirements of this chapter, other than WAC 246-231-030 and 246-231-120, with respect to shipment or carriage of low-specific-activity (LSA) material in group LSA-I, or surface contaminated objects (SCOs) in group SCO-I.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-040, filed 7/21/99, effective 8/21/99.]

WAC 246-231-050 General licenses for carriers. (1)

A general license is hereby issued to any common or contract carrier not exempted under WAC 246-231-040 to receive, possess, transport and store radioactive material in the regular course of their carriage for another or storage incident thereto, provided the transportation and storage is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation.

(2) A general license is hereby issued to any private carrier to transport radioactive material, provided the transportation is in accordance with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation insofar as such regulations relate to the loading and storage of packages, placarding of the transporting vehicle, shipping papers, and incident reporting. Any notification of incidents referred to in those requirements shall be filed with, or made to, the department.

(3) Persons who transport radioactive material pursuant to the general licenses of subsection (1) or (2) of this section are exempt from the requirements of chapters 246-221 and 246-222 WAC to the extent that they transport radioactive material.

(4) A general license is hereby issued to deliver radioactive material to a carrier¹ for transport provided that:

(a) The licensee complies with the applicable requirements of the regulations, appropriate to the mode of transport, of the United States Department of Transportation insofar as such regulations relate to the packaging of radioactive material, to shipping papers, and to the monitoring, marking and labeling of those packages.

(b) The licensee has established procedures for opening and closing packages in which radioactive material is transported to provide safety and to assure that, prior to the delivery to a carrier for transport, each package is properly closed for transport.

(c) Prior to delivery of a package to a carrier for transport, the licensee shall assure that any special instructions needed to safely open the package are sent to or have been made available to the consignee.

(d) In addition to the requirements of the United States Department of Transportation, each package of Type A or B

quantity radioactive material prepared for shipment must have the innermost container labeled as to the isotope, chemical form, number of bequerels or subunits thereof, and date of determination of activity and each innermost container shall be tested to assure that the container is properly sealed and that contamination which would cause undue hazard to public health and safety or property is not present prior to transportation. This requirement does not apply to properly packaged shipments of radioactive waste consigned to a commercial low level radioactive waste disposal facility.

Note 1- For the purpose of this regulation, licensees who transport their own licensed material as a private carrier are considered to have delivered such material to a carrier for transport.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-050, filed 7/21/99, effective 8/21/99.]

WAC 246-231-060 General license—NRC-approved package. (1) A general license is hereby issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the department or NRC.

(2) This general license applies only to a licensee who has a quality assurance program approved by the USNRC.

(3) This general license applies only to a licensee who:

(a) Has a copy of the certificate of compliance, or other approval of the package, and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the actions to be taken before shipment;

(b) Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of the USNRC; and

(c) Submits in writing to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, before the licensee's first use of the package, the licensee's name and license number and the package identification number specified in the package approval.

(4) This general license applies only when the package approval authorizes use of the package under this general license.

(5) For a Type B or fissile material package, the design of which was approved by NRC before April 1, 1996, the general license is subject to the additional restrictions of NRC regulations 10 CFR 71.13.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-060, filed 7/21/99, effective 8/21/99.]

WAC 246-231-070 Previously approved package. (1) A Type B package previously approved by NRC but not designated as B(U) or B(M) in the identification number of the NRC Certificate of Compliance, may be used under the general license of WAC 246-231-060 with the following additional conditions:

(a) Fabrication of the packaging was satisfactorily completed by August 31, 1986, as demonstrated by application of its model number in accordance with WAC 246-231-100 (2)(c);

(b) A package used for a shipment to a location outside the United States is subject to multilateral approval, as defined in DOT regulations at 49 CFR 173.403; and

(c) A serial number that uniquely identifies each packaging which conforms to the approved design is assigned to, and legibly and durably marked on, the outside of each packaging.

(2) A Type B(U) package, a Type B(M) package, a low specific activity (LSA) material package or a fissile material package, previously approved by the NRC but without the designation "-85" in the identification number of the NRC Certificate of Compliance, may be used under the general license of WAC 246-231-060 with the following additional conditions:

(a) Fabrication of the package is satisfactorily completed by April 1, 1999, as demonstrated by application of its model number in accordance with WAC 246-231-100 (2)(c);

(b) A package used for a shipment to a location outside the United States is subject to multilateral approval as defined in DOT regulations at 49 CFR 173.403; and

(c) A serial number which uniquely identifies each packaging which conforms to the approved design is assigned to and legibly and durably marked on the outside of each packaging.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-070, filed 7/21/99, effective 8/21/99.]

WAC 246-231-080 General license—DOT specification container. (1) A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a specification container for fissile material or for a Type B quantity of radioactive material as specified in DOT regulations at 49 CFR Parts 173 and 178.

(2) This general license applies only to a licensee who has a quality assurance program approved by the NRC as satisfying the provisions of subpart H of the NRC regulations, 10 CFR 71.

(3) This general license applies only to a licensee who:

(a) Has a copy of the specification; and

(b) Complies with the terms and conditions of the specification and the applicable requirements of subparts A, G, and H of NRC regulations 10 CFR 71.

(4) This general license is subject to the limitation that the specification container may not be used for a shipment to a location outside the United States, except by multilateral approval, as defined in DOT regulations at 49 CFR 173.403.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-080, filed 7/21/99, effective 8/21/99.]

WAC 246-231-090 General license—Use of foreign approved package. (1) A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a package the design of which has been approved in a foreign national competent authority certificate that has been revalidated by DOT as meeting the applicable requirements of 49 CFR 171.12.

(2) Except as otherwise provided in this section, the general license applies only to a licensee who has a quality assurance program approved by the USNRC.

(2003 Ed.)

(3) This general license applies only to shipments made to or from locations outside the United States.

(4) This general license applies only to a licensee who:

(a) Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate, relating to the use and maintenance of the packaging and to the actions to be taken before shipment; and

(b) Complies with the terms and conditions of the certificate and revalidation, and with the applicable requirements of the USNRC.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-090, filed 7/21/99, effective 8/21/99.]

WAC 246-231-100 Applicability of operating controls and procedures. (1) A licensee subject to this chapter, who, under a general or specific license, transports licensed material or delivers licensed material to a carrier for transport, shall also comply with the requirements of NRC regulations 10 CFR 71 subpart G, with the quality assurance requirements of subpart H, and with the general provisions of subpart A.

(2) Before the first use of any packaging for the shipment of licensed material:

(a) The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce the effectiveness of the packaging;

(b) Where the maximum normal operating pressure will exceed 35 kPa (5 lbf/in²) gauge, the licensee shall test the containment system at an internal pressure at least fifty percent higher than the maximum normal operating pressure, to verify the capability of that system to maintain its structural integrity at that pressure; and

(c) The licensee shall conspicuously and durably mark the packaging with its model number, serial number, gross weight, and a package identification number assigned by NRC. Before applying the model number, the licensee shall determine that the packaging has been fabricated in accordance with the design approved by the U.S. Nuclear Regulatory Commission.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-100, filed 7/21/99, effective 8/21/99.]

WAC 246-231-110 Routine determinations. Before each shipment of licensed material, the licensee shall ensure that the package with its contents satisfies the applicable requirements of this section and of the license. The licensee shall determine that:

(1) The package is proper for the contents to be shipped;

(2) The package is in unimpaired physical condition except for superficial defects such as marks or dents;

(3) Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;

(4) Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;

(5) Any pressure relief device is operable and set in accordance with written procedures;

(6) The package has been loaded and closed in accordance with written procedures;

[Title 246 WAC—p. 325]

(7) For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;

(8) Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of NRC regulations 10 CFR 71.45;

(9) The level of nonfixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable, and within the limits specified in DOT regulations in 49 CFR 173.443;

(10) External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in NRC regulations 10 CFR 71.47 at any time during transportation; and

(11) Accessible package surface temperatures will not exceed the limits specified in NRC regulations 10 CFR 71.43(g) at any time during transportation.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-110, filed 7/21/99, effective 8/21/99.]

WAC 246-231-120 Air transport of plutonium. (1) Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this part or included indirectly by citation of 49 CFR chapter I, as may be applicable, the licensee shall assure that plutonium in any form, whether for import, export, or domestic shipment, is not transported by air or delivered to a carrier for air transport unless:

(a) The plutonium is contained in a medical device designed for individual human application; or

(b) The plutonium is contained in a material in which the specific activity is not greater than 0.002 uCi/g (70 Bq/g) of material and in which the radioactivity is essentially uniformly distributed; or

(c) The plutonium is shipped in a single package containing no more than an A2 quantity of plutonium in any isotope or form, and is shipped in accordance with WAC 246-231-030; or

(d) The plutonium is shipped in a package specifically authorized for the shipment of plutonium by air in the Certificate of Compliance for that package issued by the U.S. Nuclear Regulatory Commission.

(2) Nothing in subsection (1) of this section is to be interpreted as removing or diminishing the requirements of NRC regulations 10 CFR 73.24.

(3) For a shipment of plutonium by air which is subject to subsection (1)(d) of this section, the licensee shall, through special arrangement with the carrier, require compliance with 49 CFR 175.704, U.S. Department of Transportation regulations applicable to the air transport of plutonium.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-120, filed 7/21/99, effective 8/21/99.]

WAC 246-231-130 Opening instructions. Before delivery of a package to a carrier for transport, the licensee shall ensure that any special instructions needed to safely open the package have been sent to, or otherwise made available to, the consignee for the consignee's use in accordance with WAC 246-221-160.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-130, filed 7/21/99, effective 8/21/99.]

WAC 246-231-140 Advance notification of shipment of irradiated reactor fuel and nuclear waste. (1) As specified in subsections (2), (3), and (4) of this section, each licensee shall provide advance notification to the governor of a state, or the governor's designee, of the shipment of licensed material, through, or across the boundary of the state, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.

(2) Advance notification is required under this section for shipments of irradiated reactor fuel in quantities less than that subject to advance notification requirements of NRC regulations 10 CFR 73.37(f). Advance notification is also required under this section for shipment of licensed material, other than irradiated fuel, meeting the following three conditions:

(a) The licensed material is required by this section to be in Type B packaging for transportation;

(b) The licensed material is being transported to or across a state boundary en route to a disposal facility or to a collection point for transport to a disposal facility; and

(c) The quantity of licensed material in a single package exceeds the least of the following:

(i) 3000 times the A1 value of the radionuclides as specified in WAC 246-231-200, Table A-1 for special form radioactive material;

(ii) 3000 times the A2 value of the radionuclides as specified in WAC 246-231-200, Table A-1 for normal form radioactive material; or

(iii) 1000 TBq (27,000 Ci).

(3) Procedures for submitting advance notification.

(a) The notification must be made in writing to the office of each appropriate governor or governor's designee and to the Administrator of the appropriate NRC Regional Office listed in Appendix A of NRC regulations 10 CFR Part 73.

(b) A notification delivered by mail must be postmarked at least seven days before the beginning of the seven-day period during which departure of the shipment is estimated to occur.

(c) A notification delivered by messenger must reach the office of the governor or of the governor's designee at least four days before the beginning of the seven-day period during which departure of the shipment is estimated to occur.

(i) A list of the names and mailing addresses of the governors' designees receiving advance notification of transportation of nuclear waste was published in the *Federal Register* on June 30, 1995, (60 FR 34306).

(ii) The list will be published annually in the *Federal Register* on or about June 30 to reflect any changes in information.

(iii) A list of the names and mailing addresses of the governors' designees is available on request from the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(d) The licensee shall retain a copy of the notification as a record for three years.

(4) Information to be furnished in advance notification of shipment. Each advance notification of shipment of irradiated reactor fuel or nuclear waste must contain the following information:

(a) The name, address, and telephone number of the shipper, carrier, and receiver of the irradiated reactor fuel or nuclear waste shipment;

(b) A description of the irradiated reactor fuel or nuclear waste contained in the shipment, as specified in the regulations of DOT in 49 CFR 172.202 and 172.203(d);

(c) The point of origin of the shipment and the seven-day period during which departure of the shipment is estimated to occur;

(d) The seven-day period during which arrival of the shipment at state boundaries is estimated to occur;

(e) The destination of the shipment, and the seven-day period during which arrival of the shipment is estimated to occur; and

(f) A point of contact, with a telephone number, for current shipment information.

(5) Revision notice. A licensee who finds that schedule information previously furnished to a governor or governor's designee, in accordance with this section, will not be met, shall telephone a responsible individual in the office of the governor of the state or of the governor's designee and inform that individual of the extent of the delay beyond the schedule originally reported. The licensee shall maintain a record of the name of the individual contacted for three years.

(6) Cancellation notice.

(a) Each licensee who cancels an irradiated reactor fuel or nuclear waste shipment for which advance notification has been sent shall send a cancellation notice to the governor of each state or to the governor's designee previously notified, and to the Administrator of the appropriate NRC Regional Office listed in Appendix A of USNRC regulations 10 CFR 73.

(b) The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being canceled. The licensee shall retain a copy of the notice as a record for three years.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-231-140, filed 7/21/99, effective 8/21/99.]

WAC 246-231-200 Appendix A—Determination of A1 and A2. I. Values of A1 and A2 for individual radionuclides, which are the bases for many activity limits elsewhere in these regulations are given in Table A-1. The curie (Ci) values specified are obtained by converting from the Becquerel (TBq) figure. The curie values are expressed to three significant figures to assure that the difference in the TBq and Ci quantities is one tenth of one percent or less. Where values of A1 or A2 are unlimited, it is for radiation control purposes only. For nuclear criticality safety, some materials are subject to controls placed on fissile material.

II. For individual radionuclides whose identities are known, but which are not listed in Table A-1, the determination of the values of A1 and A2 requires NRC approval, except that the values of A1 and A2 in Table A-2 may be used without obtaining approval from the NRC.

(2003 Ed.)

III. In the calculations of A1 and A2 for a radionuclide not in Table A-1, a single radioactive decay chain, in which radionuclides are present in their naturally occurring proportions, and in which no daughter nuclide has a half-life either longer than ten days, or longer than that of the parent nuclide, shall be considered as a single radionuclide, and the activity to be taken into account, and the A1 or A2 value to be applied shall be those corresponding to the parent nuclide of that chain. In the case of radioactive decay chains in which any daughter nuclide has a half-life either longer than ten days, or greater than that of the parent nuclide, the parent and those daughter nuclides shall be considered as mixtures of different nuclides.

IV. For mixtures of radionuclides whose identities and respective activities are known, the following conditions apply:

(a) For special form radioactive material, the maximum quantity transported in a Type A package:

$$\sum_I \frac{B(i)}{A1(i)} \quad \text{less than or equal to } 1$$

(b) For normal form radioactive material, the maximum quantity transported in a Type A package:

$$\sum_I \frac{B(i)}{A2(i)} \quad \text{less than or equal to } 1$$

Where B(i) is the activity of radionuclide I and A1(i) and A2(i) are the A1 and A2 values for radionuclide I, respectively.

Alternatively, an A1 value for mixtures of special form material may be determined as follows:

$$A1 \text{ for mixture} = \frac{1}{\sum_I \frac{f(i)}{A1(i)}}$$

Where f(i) is the fraction of activity of nuclide I in the mixture and A1(i) is the appropriate A1 value for nuclide I.

An A2 value for mixtures of normal form material may be determined as follows:

$$A2 \text{ for mixture} = \frac{1}{\sum_I \frac{f(i)}{A2(i)}}$$

Where f(i) is the fraction of activity of nuclide I in the mixture and A2(i) is the appropriate A2 value for nuclide I.

V. When the identity of each radionuclide is known, but the individual activities of some of the radionuclides are not known, the radionuclides may be grouped and the lowest A1 or A2 value, as appropriate, for the radionuclides in each group may be used in applying the formulas in paragraph IV. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest A1 or A2 values for the alpha emitters and beta/gamma emitters.

[Title 246 WAC—p. 327]

Table A-1.—A1 and A2 Values for Radionuclides

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Ac-225	Actinium (89)	0.6	16.2	1E-2	0.270	2.1E+3	5.8E+4
Ac-227		40	1080	2E-5	5.41E-4	2.7	7.2E+1
Ac-228		0.6	16.2	0.4	10.8	8.4E+4	2.2E+6
Ag-105	Silver (47)	2	54.1	2	54.1	1.1E+3	3.0E+4
Ag-108m		0.6	16.2	0.6	16.2	9.7E-1	2.6E+1
Ag-110m		0.4	10.8	0.4	10.8	1.8E+2	4.7E+3
Ag-111		0.6	16.2	0.5	13.5	5.8E+3	1.6E+5
Al-26	Aluminum (13)	0.4	10.8	0.4	10.8	7.0E-4	1.9E-2
Am-241	Americium (95)	2	54.1	2E-4	5.41E-3	1.3E-1	3.4
Am-242m		2	54.1	2E-4	5.41E-3	3.6E-1	1.0E+1
Am-243		2	54.1	2E-4	5.41E-3	7.4E-3	2.0E-1
Ar-37	Argon (18)	40	1080	40	1080	3.7E+3	9.9E+4
Ar-39		20	541	20	541	1.3	3.4E+1
Ar-41		0.6	16.2	0.6	16.2	1.5E+6	4.2E+7
Ar-42		0.2	5.41	0.2	5.41	9.6	2.6E+2
As-72	Arsenic (33)	0.2	5.41	0.2	5.41	6.2E+4	1.7E+6
As-73		40	1080	40	1080	8.2E+2	2.2E+4
As-74		1	27.0	0.5	13.5	3.7E+3	9.9E+4
As-76		0.2	5.41	0.2	5.41	5.8E+4	1.6E+6
As-77		20	541	0.5	13.5	3.9E+4	1.0E+6
At-211	Astatine (85)	30	811	2	54.1	7.6E+4	2.1E+6
Au-193	Gold (79)	6	162	6	162	3.4E+4	9.2E+5
Au-194		1	27.0	1	27.0	1.5E+4	4.1E+5
Au-195		10	270	10	270	1.4E+2	3.7E+3
Au-196		2	54.1	2	54.1	4.0E+3	1.1E+5
Au-198		3	81.1	0.5	13.5	9.0E+3	2.4E+5
Au-199		10	270	0.9	24.3	7.7E+3	2.1E+5
Ba-131	Barium (56)	2	54.1	2	54.1	3.1E+3	8.4E+4
Ba-133m		10	270	0.9	24.3	2.2E+4	6.1E+5
Ba-133		3	81.1	3	81.1	9.4	2.6E+2
Ba-140		0.4	10.8	0.4	10.8	2.7E+3	7.3E+4
Be-7	Beryllium (4)	20	541	20	541	1.3E+4	3.5E+5
Be-10		20	541	0.5	13.5	8.3E-4	2.2E-2
Bi-205	Bismuth (83)	0.6	16.2	0.6	16.2	1.5E-3	4.2E+4
Bi-206		0.3	8.11	0.3	8.11	3.8E+3	1.0E+5
Bi-207		0.7	18.9	0.7	18.9	1.9	5.2E+1
Bi-210m		0.3	8.11	3E-2	0.811	2.1E-5	5.7E-4
Bi-210		0.6	16.2	0.5	13.5	4.6E+3	1.2E+5
Bi-212		0.3	8.11	0.3	8.11	5.4E+5	1.5E+7
Bk-247	Berkelium (97)	2	54.1	2E-4	5.41E-3	3.8E-2	1.0
Bk-249		40	1080	8E-2	2.16	6.1E+1	1.6E+3
Br-76	Bromine (35)	0.3	8.11	0.3	8.11	9.4E+4	2.5E+6
Br-77		3	81.1	3	81.1	2.6E+4	7.1E+5
Br-82		0.4	10.8	0.4	10.8	4.0E+4	1.1E+6
C-11	Carbon (6)	1	27	0.5	13.5	3.1E+7	8.4E+8
C-14		40	1080	2	54.1	1.6E-1	4.5
Ca-41	Calcium (20)	40	1080	40	1080	3.1E-3	8.5E-2
Ca-45		40	1080	0.9	24.3	6.6E+2	1.8E+4
Ca-47		0.9	24.3	0.5	13.5	2.3E+4	6.1E+5
Cd-109	Cadmium (48)	40	1080	1	27.0	9.6E+1	2.6E+3
Cd-113m		20	541	9E-2	2.43	8.3	2.2E+2
Cd-115m		0.3	8.11	0.3	8.11	9.4E+2	2.5E+4
Cd-115		4	108	0.5	13.5	1.9E+4	5.1E+5
Ce-139	Cerium (58)	6	162	6	162	2.5E+2	6.8E+3
Ce-141		10	270	0.5	13.5	1.1E+3	2.8E+4
Ce-143		0.6	16.2	0.5	13.5	2.5E+4	6.6E+5
Ce-144		0.2	5.41	0.2	5.41	1.2E+2	3.2E+3
Cf-248	Californium (98)	30	811	3E-3	8.11E-2	5.8E+1	1.6E+3
Cf-249		2	54.1	2E-4	5.41E-3	1.5E-1	4.1
Cf-250		5	135	5E-4	1.35E-2	4.0	1.1E+2
Cf-251		2	54.1	2E-4	5.41E-3	5.9E-2	1.6
Cf-252		0.1	2.70	1E-3	2.70E-2	2.0E+1	5.4E+2
Cf-253		40	1080	6E-2	1.62	1.1E+3	2.9E+4
Cf-254		3E-3	8.11E-2	6E-4	1.62E-2	3.1E+2	8.5E+3
Cl-36	Chlorine (17)	20	541	0.5	13.5	1.2E-3	3.3E-2
Cl-38		0.2	5.41	0.2	5.41	4.9E+6	1.3E+8
Cm-240	Curium (96)	40	1080	2E-2	0.541	7.5E+2	2.0E+4
Cm-241		2	54.1	0.9	24.3	6.1E+2	1.7E+4
Cm-242		40	1080	1E-2	0.270	1.2E+2	3.3E+3
Cm-243		3	81.1	3E-4	8.11E-3	1.9	5.2E+1

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Cm-244		4	108	4E-4	1.08E-2	3.0	8.1E+1
Cm-245		2	54.1	2E-4	5.41E-3	6.4E-3	1.7E-1
Cm-246		2	54.1	2E-4	5.41E-3	1.1E-2	3.1E-1
Cm-247		2	54.1	2E-4	5.41E-3	3.4E-6	9.3E-5
Cm-248		4E-2	1.08	5E-5	1.35E-3	1.6E-4	4.2E-3
Co-55	Cobalt (27)	0.5	13.5	0.5	13.5	1.1E+5	3.1E+6
Co-56		0.3	8.11	0.3	8.11	1.1E+3	3.0E+4
Co-57		8	216	8	216	3.1E+2	8.4E+3
Co-58m		40	1080	40	1080	2.2E+5	5.9E+6
Co-58		1	27.0	1	27.0	1.2E+3	3.2E+4
Co-60		0.4	10.8	0.4	10.8	4.2E+1	1.1E+3
Cr-51	Chromium (24)	30	811	30	811	3.4E+3	9.2E+4
Cs-129	Cesium (55)	4	108	4	108	2.8E+4	7.6E+5
Cs-131		40	1080	40	1080	3.8E+3	1.0E+5
Cs-132		1	27.0	1	27.0	5.7E+3	1.5E+5
Cs-134m		40	1080	9	243	3.0E+5	8.0E+6
Cs-134		0.6	16.2	0.5	13.5	4.8E+1	1.3E+3
Cs-135		40	1080	0.9	24.3	4.3E-5	1.2E-3
Cs-136		0.5	13.5	0.5	13.5	2.7E+3	7.3E+4
Cs-137		2	54.1	0.5	13.5	3.2	8.7E+1
Cu-64	Copper (29)	5	135	0.9	24.3	1.4E+5	3.9E+6
Cu-67		9	243	0.9	24.3	2.8E+4	7.6E+5
Dy-159	Dysprosium (66)	20	541	20	541	2.1E+2	5.7E+3
Dy-165		0.6	16.2	0.5	13.5	3.0E+5	8.2E+6
Dy-166		0.3	8.11	0.3	8.11	8.6E+3	2.3E+5
Er-169	Erbium (68)	40	1080	0.9	24.3	3.1E+3	8.3E+4
Er-171		0.6	16.2	0.5	13.5	9.0E+4	2.4E+6
Es-253	Einsteinium (99)a	200	5400	2E-2	5.41E-1		
Es-254		30	811	3E-3	8.11E-2		
Es-254m		0.6	16.2	0.4	10.8		
Es-255							
Eu-147	Europium (63)	2	54.1	2	54.1	1.4E+3	3.7E+4
Eu-148		0.5	13.5	0.5	13.5	6.0E+2	1.6E+4
Eu-149		20	541	20	541	3.5E+2	9.4E+3
Eu-150		0.7	18.9	0.7	18.9	6.1E+4	1.6E+6
Eu-152m		0.6	16.2	0.5	13.5	8.2E+4	2.2E+6
Eu-152		0.9	24.3	0.9	24.3	6.5	1.8E+2
Eu-154		0.8	21.6	0.5	13.5	9.8	2.6E+2
Eu-155		20	541	2	54.1	1.8E+1	4.9E+2
Eu-156		0.6	16.2	0.5	13.5	2.0E+3	5.5E+4
F-18	Fluorine (9)	1	27.0	0.5	13.5	3.5E+6	9.5E+7
Fe-52	Iron (26)	0.2	5.41	0.2	5.41	2.7E+5	7.3E+6
Fe-55		40	1080	40	1080	8.8E+1	2.4E+3
Fe-59		0.8	21.6	0.8	21.6	1.8E+3	5.0E+4
Fe-60		40	1080	0.2	5.41	7.4E-4	2.0E-2
Fm-255	Fermium (100) b	40	1080	0.8	21.6		
Fm-257		10	270	8E-3	2.16E-1		
Ga-67	Gallium (31)	6	162	6	162	2.2E+4	6.0E+5
Ga-68		0.3	8.11	0.3	8.11	1.5E+6	4.1E+7
Ga-72		0.4	10.8	0.4	10.8	1.1E+5	3.1E+6
Gd-146	Gadolinium (64)	0.4	10.8	0.4	10.8	6.9E+2	1.9E+4
Gd-148		3	81.1	3E-4	8.11E-3	1.2	3.2E+1
Gd-153		10	270	5	135	1.3E+2	3.5E+3
Gd-159		4	108	0.5	13.5	3.9E+4	1.1E+6
Ge-68	Germanium (32)	0.3	8.11	0.3	8.11	2.6E+2	7.1E+3
Ge-71		40	1080	40	1080	5.8E+3	1.6E+5
Ge-77		0.3	8.11	0.3	8.11	1.3E+5	3.6E+6
H-3	Hydrogen (1)	See T-	Tritium				
Hf-172	Hafnium (72)	0.5	13.5	0.3	8.11	4.1E+1	1.1E+3
Hf-175		3	81.1	3	81.1	3.9E+2	1.1E+4
Hf-181		2	54.1	0.9	24.3	6.3E+2	1.7E+4
Hf-182		4	108	3E-2	0.811	8.1E-6	2.2E-4
Hg-194	Mercury (80)	1	27.0	1	27.0	1.3E-1	3.5
Hg-195m		5	135	5	135	1.5E+4	4.0E+5
Hg-197m		10	270	0.9	24.3	2.5E+4	6.7E+5
Hg-197		10	270	10	270	9.2E+3	2.5E+5
Hg-203		4	108	0.9	24.3	5.1E+2	1.4E+4
Ho-163	Holmium (67)	40	1080	40	1080	2.7	7.6E+1
Ho-166m		0.6	16.2	0.3	8.11	6.6E-2	1.8
Ho-166		0.3	8.11	0.3	8.11	2.6E+4	7.0E+5
I-123	Iodine (53)	6	162	6	162	7.1E+4	1.9E+6
I-124		0.9	24.3	0.9	24.3	9.3E+3	2.5E+5

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
I-125		20	541	2	54.1	6.4E+2	1.7E+4
I-126		2	54.1	0.9	24.3	2.9E+3	8.0E+4
I-129		Unlimited	Unlimited	Unlimited	Unlimited	6.5E-6	1.8E-4
I-131		3	81.1	0.5	13.5	4.6E+3	1.2E+5
I-132		0.4	10.8	0.4	10.8	3.8E+5	1.0E+7
I-133		0.6	16.2	0.5	13.5	4.2E+4	1.1E+6
I-134		0.3	8.11	0.3	8.11	9.9E+5	2.7E+7
I-135		0.6	16.2	0.5	13.5	1.3E+5	3.5E+6
In-111	Indium (49)	2	54.1	2	54.1	1.5E+4	4.2E+5
In-113m		4	108	4	108	6.2E+5	1.7E+7
In-114m		0.3	8.11	0.3	8.11	8.6E+2	2.3E+4
In-115m		6	162	0.9	24.3	2.2E+5	6.1E+6
Ir-189	Iridium (77)	10	270	10	270	1.9E+3	5.2E+4
Ir-190		0.7	18.9	0.7	18.9	2.3E+3	6.2E+4
Ir-192		1	27.0	0.5	13.5	3.4E+2	9.2E+3
Ir-193m		10	270	10	270	2.4E+3	6.4E+4
Ir-194		0.2	5.41	0.2	5.41	3.1E+4	8.4E+5
K-40	Potassium (19)	0.6	16.2	0.6	16.2	2.4E-7	6.4E-6
K-42		0.2	5.41	0.2	5.41	2.2E+5	6.0E+6
K-43		1.0	27.0	0.5	13.5	1.2E+5	3.3E+6
Kr-81	Krypton (36)	40	1080	40	1080	7.8E-4	2.1E-2
Kr-85m		6	162	6	162	3.0E+5	8.2E+6
Kr-85		20	541	10	270	1.5E+1	3.9E+2
Kr-87		0.2	5.41	0.2	5.41	1.0E+6	2.8E+7
La-137	Lanthanum (57)	40	1080	2	54.1	1.6E-3	4.4E-2
La-140		0.4	10.8	0.4	10.8	2.1E+4	5.6E+5
Lu-172	Lutetium (71)	0.5	13.5	0.5	13.5	4.2E+3	1.1E+5
Lu-173		8	216	8	216	5.6E+1	1.5E+3
Lu-174m		20	541	8	216	2.0E+2	5.3E+3
Lu-174		8	216	4	108	2.3E+1	6.2E+2
Lu-177		30	811	0.9	24.3	4.1E+3	1.1E+5
MFP		(6) For mixed fission products, use formula for mixtures or Table A-2					
Mg-28	Magnesium (12)	0.2	5.41	0.2	5.41	2.0E+5	5.4E+6
Mn-52	Manganese (25)	0.3	8.11	0.3	8.11	1.6E+4	4.4E+5
Mn-53		Unlimited	Unlimited	Unlimited	Unlimited	6.8E-5	1.8E-3
Mn-54		1	27.0	1	27.0	2.9E+2	7.7E+3
Mn-56		0.2	5.41	0.2	5.41	8.0E+5	2.2E+7
Mo-93	Molybdenum (42)	40	1080	7	189	4.1E-2	1.1
Mo-99		0.6	16.2	0.5	13.5c	1.8E+4	4.8E+5
N-13	Nitrogen (7)	0.6	16.2	0.5	13.5	5.4E+7	1.5E+9
Na-22	Sodium (11)	0.5	13.5	0.5	13.5	2.3E+2	6.3E+3
Na-24		0.2	5.41	0.2	5.41	3.2E+5	8.7E+6
Nb-92m	Niobium (41)	0.7	18.9	0.7	18.9	5.2E+3	1.4E+5
Nb-93m		40	1080	6	162	8.8	2.4E+2
Nb-94		0.6	16.2	0.6	16.2	6.9E-3	1.9E-1
Nb-95		1	27.0	1	27.0	1.5E+3	3.9E+4
Nb-97		0.6	16.2	0.5	13.5	9.9E+5	2.7E+7
Nd-147	Neodymium (60)	4	108	0.5	13.5	3.0E+3	8.1E+4
Nd-149		0.6	16.2	0.5	13.5	4.5E+5	1.2E+7
Ni-59	Nickel (28)	40	1080	40	1080	3.0E-3	8.0E-2
Ni-63		40	1080	30	811	2.1	5.7E+1
Ni-65		0.3	8.11	0.3	8.11	7.1E+5	1.9E+7
Np-235	Neptunium (93)	40	1080	40	1080	5.2E+1	1.4E+3
Np-236		7	189	1E-3	2.70E-2	4.7E-4	1.3E-2
Np-237		2	54.1	2.0E-4	5.41E-3	2.6E-5	7.1E-4
Np-239		6	162	0.5	13.5	8.6E+3	2.3E+5
Os-185	Osmium (76)	1	27.0	1	27.0	2.8E+2	7.5E+3
Os-191m		40	1080	40	1080	4.6E+4	1.3E+6
Os-191		10	270	0.9	24.3	1.6E+3	4.4E+4
Os-193		0.6	16.2	0.5	13.5	2.0E+4	5.3E+5
Os-194		0.2	5.41	0.2	5.41	1.1E+1	3.1E+2
P-32	Phosphorus (15)	0.3	8.11	0.3	8.11	1.1E+4	2.9E+5
P-33		40	1080	0.9	24.3	5.8E+3	1.6E+5
Pa-230	Protactinium (91)	2	54.1	0.1	2.70	1.2E+3	3.3E+4
Pa-231		0.6	16.2	6E-5	1.62E-3	1.7E-3	4.7E-2
Pa-233		5	135	0.9	24.3	7.7E+2	2.1E+4
Pb-201	Lead (82)	1	27.0	1	27.0	6.2E+4	1.7E+6
Pb-202		40	1080	2	54.1	1.2E-4	3.4E-3
Pb-203		3	81.1	3	81.1	1.1E+4	3.0E+5
Pb-205		Unlimited	Unlimited	Unlimited	Unlimited	4.5E-6	1.2E-4
Pb-210		0.6	16.2	9E-3	0.243	2.8	7.6E+1
Pb-212		0.3	8.11	0.3	8.11	5.1E+4	1.4E+6

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Pd-103	Palladium (46)	40	1080	40	1080	2.8E+3	7.5E+4
Pd-107		Unlimited	Unlimited	Unlimited	Unlimited	1.9E-5	5.1E-4
Pd-109		0.6	16.2	0.5	13.5	7.9E+4	2.1E+6
Pm-143	Promethium (61)	3	81.1	3	81.1	1.3E+2	3.4E+3
Pm-144		0.6	16.2	0.6	16.2	9.2E+1	2.5E+3
Pm-145		30	811	7	189	5.2	1.4E+2
Pm-147		40	1080	0.9	24.3	3.4E+1	9.3E+2
Pm-148m		0.5	13.5	0.5	13.5	7.9E+2	2.1E+4
Pm-149		0.6	16.2	0.5	13.5	1.5E+4	4.0E+5
Pm-151		3	81.1	0.5	13.5	2.7E+4	7.3E+5
Po-208	Polonium (84)	40	1080	2E-2	0.541	2.2E+1	5.9E+2
Po-209		40	1080	2E-2	0.541	6.2E-1	1.7E+1
Po-210		40	1080	2E-2	0.541	1.7E+2	4.5E+3
Pr-142	Praseodymium (59)	0.2	5.41	0.2	5.41	4.3E+4	1.2E+6
Pr-143		4	108	0.5	13.5	2.5E+3	6.7E+4
Pt-188	Platinum (78)	0.6	16.2	0.6	16.2	2.5E+3	6.8E+4
Pt-191		3	81.1	3	81.1	8.7E+3	2.4E+5
Pt-193m		40	1080	9	243	5.8E+3	1.6E+5
Pt-193		40	1080	40	1080	1.4	3.7E+1
Pt-195m		10	270	2	54.1	6.2E+3	1.7E+5
Pt-197m		10	270	0.9	24.3	3.7E+5	1.0E+7
Pt-197		20	541	0.5	13.5	3.2E+4	8.7E+5
Pu-236	Plutonium (94)	7	189	7E-4	1.89E-2	2.0E+1	5.3E+2
Pu-237		20	541	20	541	4.5E+2	1.2E+4
Pu-238		2	54.1	2E-4	5.41E-3	6.3E-1	1.7E+1
Pu-239		2	54.1	2E-4	5.41E-3	2.3E-3	6.2E-2
Pu-240		2	54.1	2E-4	5.41E-3	8.4E-3	2.3E-1
Pu-241		40	1080	1E-2	0.270	3.8	1.0E+2
Pu-242		2	54.1	2E-4	5.41E-3	1.5E-4	3.9E-3
Pu-244		0.3	8.11	2E-4	5.41E-3	6.7E-7	1.8E-5
Ra-223	Radium (88)	0.6	16.2	3E-2	0.811	1.9E+3	5.1E+4
Ra-224		0.3	8.11	6E-2	1.62	5.9E+3	1.6E+5
Ra-225		0.6	16.2	2E-2	0.541	1.5E+3	3.9E+4
Ra-226		0.3	8.11	2E-2	0.541	3.7E-2	1.0
Ra-228		0.6	16.2	4E-2	1.08	1.0E+1	2.7E+2
Rb-81	Rubidium (37)	2	54.1	0.9	24.3	3.1E+5	8.4E+6
Rb-83		2	54.1	2	54.1	6.8E+2	1.8E+4
Rb-84		1	27.0	0.9	24.3	1.8E+3	4.7E+4
Rb-86		0.3	8.11	0.3	8.11	3.0E+3	8.1E+4
Rb-87		Unlimited	Unlimited	Unlimited	Unlimited	3.2E-9	8.6E-8
Rb (natural)		Unlimited	Unlimited	Unlimited	Unlimited	6.7E+6	1.8E+8
Re-183	Rhenium (75)	5	135	5	135	3.8E+2	1.0E+4
Re-184m		3	81.1	3	81.1	1.6E+2	4.3E+3
Re-184		1	27.0	1	27.0	6.9E+2	1.9E+4
Re-186		4	108	0.5	13.5	6.9E+3	1.9E+5
Re-187		Unlimited	Unlimited	Unlimited	Unlimited	1.4E-9	3.8E-8
Re-188		0.2	5.41	0.2	5.41	3.6E+4	9.8E+5
Re-189		4	108	0.5	13.5	2.5E+4	6.8E+5
Re (natural)		Unlimited	Unlimited	Unlimited	Unlimited		2.4E-8
Rh-99	Rhodium (45)	2	54.1	2	54.1	3.0E+3	8.2E+4
Rh-101		4	108	4	108	4.1E+1	1.1E+3
Rh-102m		2	54.1	0.9	24.3	2.3E+2	6.2E+3
Rh-102		0.5	13.5	0.5	13.5	4.5E+1	1.2E+3
Rh-103m		40	1080	40	1080	1.2E+6	3.3E+7
Rh-105		10	270	0.9	24.3	3.1E+4	8.4E+5
Rn-222	Radon (86)	0.2	5.41	4E-3	0.108	5.7E+3	1.5E+5
Ru-97	Ruthenium (44)	4	108	4	108	1.7E+4	4.6E+5
Ru-103		2	54.1	0.9	24.3	1.2E+3	3.2E+4
Ru-105		0.6	16.2	0.5	13.5	2.5E+5	6.7E+6
Ru-106		0.2	5.41	0.2	5.41	1.2E+2	3.3E+3
S-35	Sulfur (16)	40	1080	2	54.1	1.6E+3	4.3E+4
Sb-122	Antimony (51)	0.3	8.11	0.3	8.11	1.5E+4	4.0E+5
Sb-124		0.6	16.2	0.5	13.5	6.5E+2	1.7E+4
Sb-125		2	54.1	0.9	24.3	3.9E+1	1.0E+3
Sb-126		0.4	10.8	0.4	10.8	3.1E+3	8.4E+4
Sc-44	Scandium (21)	0.5	13.5	0.5	13.5	6.7E+5	1.8E+7
Sc-46		0.5	13.5	0.5	13.5	1.3E+3	3.4E+4
Sc-47		9	243	0.9	24.3	3.1E+4	8.3E+5
Sc-48		0.3	8.11	0.3	8.11	5.5E+4	1.5E+6
Se-75	Selenium (34)	3	81.1	3	81.1	5.4E+2	1.5E+4
Se-79		40	1080	2	54.1	2.6E-3	7.0E-2
Si-31	Silicon (14)	0.6	16.2	0.5	13.5	1.4E+6	3.9E+7

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
Si-32		40	1080	0.2	5.41	3.9	1.1E+2
Sm-145	Samarium (62)	20	541	20	541	9.8E+1	2.6E+3
Sm-147		Unlimited	Unlimited	Unlimited	Unlimited	8.5E-1	2.3E-8
Sm-151		40	1080	4	108	9.7E-1	2.6E+1
Sm-153		4	108	0.5	13.5	1.6E+4	4.4E+5
Sn-113	Tin (50)	4	108	4	108	3.7E+2	1.0E+4
Sn-117m		6	162	2	54.1	3.0E+3	8.2E+4
Sn-119m		40	1080	40	1080	1.4E+2	3.7E+3
Sn-121m		40	1080	0.9	24.3	2.0	5.4E+1
Sn-123		0.6	16.2	0.5	13.5	3.0E+2	8.2E+3
Sn-125		0.2	5.41	0.2	5.41	4.0E+3	1.1E+5
Sn-126		0.3	8.11	0.3	8.11	1.0E-3	2.8E-2
Sr-82	Strontium (38)	0.2	5.41	0.2	5.41	2.3E+3	6.2E+4
Sr-85m		5	135	5	135	1.2E+6	3.3E+7
Sr-85		2	54.1	2	54.1	8.8E+2	2.4E+4
Sr-87m		3	81.1	3	81.1	4.8E+5	1.3E+7
Sr-89		0.6	16.2	0.5	13.5	1.1E+3	2.9E+4
Sr-90		0.2	5.41	0.1	2.70	5.1	1.4E+2
Sr-91		0.3	8.11	0.3	8.11	1.3E+5	3.6E+6
Sr-92		0.8	21.6	0.5	13.5	4.7E+5	1.3E+7
T	Tritium (1)	40	1080	40	1080	3.6E+2	9.7E+3
Ta-178	Tantalum (73)	1	27.0	1	27.0	4.2E+6	1.1E+8
Ta-179		30	811	30	811	4.1E+1	1.1E+3
Ta-182		0.8	21.6	0.5	13.5	2.3E+2	6.2E+3
Tb-157	Terbium (65)	40	1080	10	270	5.6E-1	1.5E+1
Tb-158		1	27.0	0.7	18.9	5.6E-1	1.5E+1
Tb-160		0.9	24.3	0.5	13.5	4.2E+2	1.1E+4
Tc-95m	Technetium (43)	2	54.1	2	54.1	8.3E+2	2.2E+4
Tc-96m		0.4	10.8	0.4	10.8	1.4E+6	3.8E+7
Tc-96		0.4	10.8	0.4	10.8	1.2E+4	3.2E+5
Tc-97m		40	1080	40	1080	5.6E+2	1.5E+4
Tc-97		Unlimited	Unlimited	Unlimited	Unlimited	5.2E-5	1.4E-3
Tc-98		0.7	18.9	0.7	18.9	3.2E-5	8.7E-4
Tc-99m		8	216	8	216	1.9E+5	5.3E+6
Tc-99		40	1080	0.9	24.3	6.3E-4	1.7E-2
Te-118	Tellurium (52)	0.2	5.41	0.2	5.41	6.8E+3	1.8E+5
Te-121m		5	135	5	135	2.6E+2	7.0E+3
Te-121		2	54.1	2	54.1	2.4E+3	6.4E+4
Te-123m		7	189	7	189	3.3E+2	8.9E+3
Te-125m		30	811	9	243	6.7E+2	1.8E+4
Te-127m		20	541	0.5	13.5	3.5E+2	9.4E+3
Te-127		20	541	0.5	13.5	9.8E+4	2.6E+6
Te-129m		0.6	16.2	0.5	13.5	1.1E+3	3.0E+4
Te-129		0.6	16.2	0.5	13.5	7.7E+5	2.1E+7
Te-131m		0.7	18.9	0.5	13.5	3.0E+4	8.0E+5
Te-132		0.4	10.8	0.4	10.8	1.1E+4	3.0E+5
Th-227	Thorium (90)	9	243	1E-2	0.270	1.1E+3	3.1E+4
Th-228		0.3	8.11	4E-4	1.08E-2	3.0E+1	8.2E+2
Th-229		0.3	8.11	3E-5	8.11E-4	7.9E-3	2.1E-1
Th-230		2	54.1	2E-4	5.41E-3	7.6E-4	2.1E-2
Th-231		40	1080	0.9	24.3	2.0E+4	5.3E+5
Th-232		Unlimited	Unlimited	Unlimited	Unlimited	4.0E-9	1.1E-7
Th-234		0.2	5.41	0.2	5.41	8.6E+2	2.3E+4
Th (natural)		Unlimited	Unlimited	Unlimited	Unlimited	8.1E-9	2.2E-7
Ti-44	Titanium (22)	0.5	13.5	0.2	5.41	6.4	1.7E+2
Tl-200	Thallium (81.1)	0.8	21.6	0.8	21.6	2.2E+4	6.0E+5
Tl-201		10	270	10	270	7.9E+3	2.1E+5
Tl-202		2	54.1	2	54.1	2.0E+3	5.3E+4
Tl-204		4	108	0.5	13.5	1.7E+1	4.6E+2
Tm-167	Thulium (69)	7	189	7	189	3.1E+3	8.5E+4
Tm-168		0.8	21.6	0.8	21.6	3.1E+2	8.3E+3
Tm-170		4	108	0.5	13.5	2.2E+2	6.0E+3
Tm-171		40	1080	10	270	4.0E+1	1.1E+3
U-230	Uranium (92)	40	1080	1E-2	0.270	1.0E+3	2.7E+4
U-232		3	81.1	3E-4	8.11E-3	8.3E-1	2.2E+1
U-233		10	270	1E-3	2.70E-2	3.6E-4	9.7E-3
U-234		10	270	1E-3	2.70E-2	2.3E-4	6.2E-3
U-235		Unlimited	Unlimited	Unlimited	Unlimited	8.0E-8	2.2E-6
U-236		10	270	1E-3	2.70E-2	2.4E-6	6.5E-5
U-238		Unlimited	Unlimited	Unlimited	Unlimited	1.2E-8	3.4E-7
U (natural)		Unlimited	Unlimited	Unlimited	Unlimited	2.6E-8	7.1E-7
U (enriched 5% or less)		Unlimited	Unlimited	Unlimited	Unlimited	(See Table A-3)	

Symbol of Radionuclide	Element and atomic number	Specific activity					
		A1 (TBq)	A1 (Ci)	A2 (TBq)	A2 (Ci)	(TBq/g)	(Ci/g)
U (enriched more than 5%)		10	270	1E-3	2.70E-2	(See Table A-3)	
U (depleted)		Unlimited	Unlimited	Unlimited	Unlimited	(See Table A-3)	
V-48	Vanadium (23)	0.3	8.11	0.3	8.11	6.3E+3	1.7E+5
V-49		40	1080	40	1080	3.0E+2	8.1E+3
W-178	Tungsten (74)	1	27.0	1	27.0	1.3E+3	3.4E+4
W-181		30	811	30	811	2.2E+2	6.0E+3
W-185		40	1080	0.9	24.3	3.5E+2	9.4E+3
W-187		2	54.1	0.5	13.5	2.6E+4	7.0E+5
W-188		0.2	5.41	0.2	5.41	3.7E+2	1.0E+4
Xe-122	Xenon (54)	0.2	5.41	0.2	5.41	4.8E+4	1.3E+6
Xe-123		0.2	5.41	0.2	5.41	4.4E+5	1.2E+7
Xe-127		4	108	4	108	1.0E+3	2.8E+4
Xe-131m		40	1080	40	1080	3.1E+3	8.4E+4
Xe-133		20	541	20	541	6.9E+3	1.9E+5
Xe-135		4	108	4	108	9.5E+4	2.6E+6
Y-87	Yttrium (39)	2	54.1	2	54.1	1.7E+4	4.5E+5
Y-88		0.4	10.8	0.4	10.8	5.2E+2	1.4E+4
Y-90		0.2	5.41	0.2	5.41	2.0E+4	5.4E+5
Y-91m		2	54.1	2	54.1	1.5E+6	4.2E+7
Y-91		0.3	8.11	0.3	8.11	9.1E+2	2.5E+4
Y-92		0.2	5.41	0.2	5.41	3.6E+5	9.6E+6
Y-93		0.2	5.41	0.2	5.41	1.2E+5	3.3E+6
Yb-169	Ytterbium (70)	3	81.1	3	81.1	8.9E+2	2.4E+4
Yb-175		30	811	0.9	24.3	6.6E+3	1.8E+5
Zn-65	Zinc (30)	2	54.1	2	54.1	3.0E+2	8.2E+3
Zn-69m		2	54.1	0.5	13.5	1.2E+5	3.3E+6
Zn-69		4	108	0.5	13.5	1.8E+6	4.9E+7
Zr-88	Zirconium (40)	3	81.1	3	81.1	6.6E+2	1.8E+4
Zr-93		40	1080	0.2	5.41	9.3E-5	2.5E-3
Zr-95		1	27.0	0.9	24.3	7.9E+2	2.1E+4
Zr-97		0.3	8.11	0.3	8.11	7.1E+4	1.9E+6

- a International shipments of Einsteinium require multilateral approval of A1 and A2 values.
- b International shipments of Fermium require multilateral approval of A1 and A2 values.
- c 20 Ci for Mo99 for domestic use.

Table A-2.—General Values for A1 and A2

Contents	A1		A2	
	(TBq)	(Ci)	(TBq)	(Ci)
Only beta- or gamma-emitting nuclides are known to be present . . .	0.2	5	0.02	0.5
Alpha-emitting nuclides are known to be present, or no relevant data are available	0.10	2.70	2E-5	5.41E-4

Table A-3.—Activity-mass Relationships for Uranium

Uranium Enrichment 1 wt % U-235 present	Specific Activity	
	TBq/g	Ci/g
0.45	1.8E-8	5.0E-7
0.72	2.6E-8	7.1E-7
1.0	2.8E-8	7.6E-7
1.5	3.7E-8	1.0E-6
5.0	1.0E-7	2.7E-6
10.0	1.8E-7	4.8E-6
20.0	3.7E-7	1.0E-5
35.0	7.4E-7	2.0E-5
50.0	9.3E-7	2.5E-5
90.0	2.2E-6	5.8E-5
93.0	2.6E-6	7.0E-5
95.0	3.4E-6	9.1E-5

¹ The figures for uranium include representative values for the activity of the uranium-234 that is concentrated during the enrichment process.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-231-200, filed 7/21/99, effective 8/21/99.]

(2003 Ed.)

**Chapter 246-232 WAC
RADIOACTIVE MATERIAL—LICENSING
APPLICABILITY**

WAC

246-232-001	Purpose and scope.
246-232-006	Exemption of certain source material.
246-232-007	Exemption of certain depleted uranium items.
246-232-008	Exemption of certain timepieces, hands or dials.
246-232-009	Exemption of certain items containing radioactive material.
246-232-010	Exempt concentrations and exempt quantities.
246-232-011	Exemption of certain self-luminous products containing radioactive material(s).
246-232-012	Exemption of certain gas and aerosol detectors containing radioactive material.
246-232-013	Exemption of certain resins containing scandium-46 and designed for sand consolidation in oil wells.
246-232-014	Exemption of C-14 urea diagnostic capsules for human use.
246-232-020	Types of licenses.
246-232-030	Prelicensing inspection.
246-232-040	Reciprocal recognition of licenses.
246-232-050	Terms and conditions of licenses.
246-232-060	Termination of licenses and decommissioning of sites and separate buildings or outdoor areas.
246-232-070	Modification and revocation of licenses.
246-232-080	Transfer of material.
246-232-090	Transportation.
246-232-120	Schedule B, exempt quantities of radioactive materials.
246-232-130	Schedule C, exempt concentrations.
246-232-140	Schedule D.
246-232-990	Fees.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

246-232-100	Requirements for users of the Washington commercial low-level waste disposal site. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as §
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246-232-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080 and chapter 70.121 RCW. 86-17-027 (Order 2406), § 402-19-530, filed 8/13/86. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-530, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-19-530, filed 12/8/80. Statutory Authority: RCW 70.98.080. 80-02-080 (Order 1481), § 402-19-530, filed 1/21/80.] Repealed by 91-15-112 (Order 184), filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 70.98.050 and 70.98.080.

246-232-110

Large volumes of naturally occurring material. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080 and chapter 70.121 RCW. 86-17-027 (Order 2406), § 402-19-540, filed 8/13/86.] Repealed by 91-15-112 (Order 184), filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 70.98.050 and 70.98.080.

WAC 246-232-001 Purpose and scope. (1) This chapter prescribes rules governing licensing of radioactive material. No person shall receive, possess, use, transfer, own or acquire radioactive material except as authorized in a specific or general license issued pursuant to chapters 246-233 or 246-235 WAC or as otherwise provided in this chapter.

(2) In addition to the requirements of this chapter, or chapters 246-233 or 246-235 WAC, all licensees are subject to the requirements of chapters 246-220, 246-221, 246-222, 246-231, 246-247, and 246-254 WAC. Licensees engaged in the practice of nuclear medicine are subject to the requirements of chapter 246-239 WAC, licensees engaged in industrial radiographic operations are subject to the requirements of chapter 246-243 WAC, licensees using sealed sources in the healing arts are subject to the requirements of chapter 246-240 WAC, licensees using radioactive material in well logging and subsurface tracer studies are subject to the requirements of chapter 246-244 WAC, licensees engaged in land disposal of radioactive waste are subject to the requirements of chapter 246-250 WAC, and licensees owning or operating uranium or thorium mills and associated mill tailings are subject to the requirements of chapter 246-252 WAC.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-232-001, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-010, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-010, filed 11/30/79, effective 1/1/80. Formerly chapter 402-20 WAC.]

WAC 246-232-006 Exemption of certain source material. (1) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses, owns, or transfers source material in any chemical mixture, compound, solution or alloy in which the source material is by weight less than 1/20 of one percent (0.05 percent) of the mixture, compound, solution, or alloy.

(2) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses or transfers unrefined and unprocessed ore containing source material, provided such person shall not refine or process such ore unless authorized to do so in a specific license.

[Title 246 WAC—p. 334]

(3) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses or transfers:

(a) Any quantities of thorium contained in:

(i) Incandescent gas mantles;

(ii) Vacuum tubes;

(iii) Welding rods;

(iv) Electric lamps for illuminating purposes if each lamp contains fifty milligrams or less of thorium;

(v) Germicidal lamps, sunlamps and lamps for outdoor or industrial lighting if each lamp contains two grams or less of thorium;

(vi) Rare earth metals and compounds, mixtures, and products containing 0.25 percent or less by weight thorium, uranium, or any combination of these; or

(vii) Personnel neutron dosimeters if each dosimeter contains 50 milligrams or less of thorium;

(b) Source material contained in the following products:

(i) Glazed ceramic tableware if the glaze contains twenty percent or less by weight source material; and

(ii) Piezoelectric ceramic containing two percent or less by weight source material;

(c) Photographic film, negatives and prints containing uranium or thorium;

(d) Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys if the thorium content of the alloy is four percent or less by weight. The exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical or metallurgical treatment or processing of any such product or part;

(e) Thorium contained in finished optical lenses if each lens contains thirty percent or less by weight of thorium. The exemption contained in this subparagraph shall not be deemed to authorize either:

(i) The shaping, grinding or polishing of lens or manufacturing processes other than the assembly of such lens into optical systems and devices without alteration of the lens; or

(ii) The receipt, possession, use or transfer of thorium contained in contact lenses, or in spectacles, or in eyepieces in binoculars or other optical instruments;

(f) Uranium contained in detector heads for use in fire detection units if each detector head contains 0.005 microcuries or less of uranium; or

(g) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy if:

(i) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and

(ii) The thorium content in the nickel-thoria alloy is four percent or less by weight.

(4) The exemptions in subsection (3) of this section do not authorize the manufacture of any of the products described.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-006, filed 12/29/00, effective 1/29/01.]

WAC 246-232-007 Exemption of certain depleted uranium items. (1) A person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses or transfers:

(2003 Ed.)

(a) Depleted uranium contained in counterweights installed in aircraft, rockets, projectiles and missiles, or stored or handled in connection with installation or removal of such counterweights if:

(i) The counterweights are manufactured in accordance with a specific license issued by the United States Nuclear Regulatory Commission authorizing distribution by the licensee pursuant to 10 C.F.R. Part 40;

(ii) Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM"*;

(iii) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED"*; and

(iv) The exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical or metallurgical treatment or processing of any such counterweight other than repair or restoration of any plating or other covering;

*Note: The requirements specified in (c) (v) (B) and (C) of this subsection need not be met by counterweights manufactured prior to December 31, 1969: Provided, That such counterweights are impressed with the legend, "CAUTION - RADIOACTIVE MATERIAL - URANIUM," as previously required by the regulations.

(b) Natural or depleted uranium used as shielding constituting part of any shipping container which is conspicuously and legibly impressed with the legend "CAUTION - RADIOACTIVE SHIELDING - URANIUM" and the uranium metal is encased in mild steel or in an equally fire resistant metal of a minimum wall thickness of 3.2 millimeters.

(2) The exemptions in this subsection do not authorize the manufacture of any of the products described.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-007, filed 12/29/00, effective 1/29/01.]

WAC 246-232-008 Exemption of certain timepieces, hands or dials. A person is exempt from these regulations to the extent the person receives, possesses, uses, transfers, owns or acquires, and does not apply radioactive material to, or incorporate radioactive material into, the following timepieces or hands or dials containing the following specified quantities of radioactive material and the following specified levels of radiation*:

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

- (1)(a) 25 millicuries or less of tritium per timepiece;
- (b) 5 millicuries or less of tritium per hand;
- (c) 15 millicuries or less of tritium per dial (bezels when used shall be considered as part of the dial);
- (d) 100 microcuries or less of promethium-147 per watch or 200 microcuries or less of promethium-147 per any other timepiece;

(2003 Ed.)

(e) 20 microcuries or less of promethium-147 per watch hand or 40 microcuries or less of promethium-147 per other timepiece hand;

(f) 60 microcuries or less of promethium-147 per watch dial or 120 microcuries or less of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial);

(2) The levels of radiation from hands and dials containing promethium-147 will not exceed, when measured through 50 milligrams per square centimeter of absorber:

(a) For wrist watches, 0.1 millirad per hour at 10 centimeters from any surface;

(b) For pocket watches, 0.1 millirad per hour at 1 centimeter from any surface;

(c) For any other timepiece, 0.2 millirad per hour at 10 centimeters from any surface.

(3) One microcurie of radium-226 per timepiece in timepieces manufactured prior to the effective date of these regulations.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-008, filed 12/29/00, effective 1/29/01.]

WAC 246-232-009 Exemption of certain items containing radioactive material. A person is exempt from these regulations to the extent the person receives, possesses, uses, transfers, owns or acquires, and does not apply radioactive material to, or incorporate radioactive material into, the following products*:

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(1) Lock illuminators containing 15 millicuries or less of tritium or 2 millicuries or less of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 will not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 50 milligrams per square centimeter of absorber.

(2) Precision balances containing 1 millicurie or less of tritium per balance or 0.5 millicurie or less of tritium per balance part.

(3) Automobile shift quadrants containing 25 millicuries or less of tritium.

(4) Marine compasses containing 750 millicuries or less of tritium gas and other marine navigational instruments containing 250 millicuries or less of tritium gas.

(5) Thermostat dials and pointers containing 25 millicuries or less of tritium per thermostat.

(6) Electron tubes* if each tube contains no more than one of the following specified quantities of radioactive material and the levels of radiation from each electron tube do not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber:

(a) 150 millicuries or less of tritium per microwave receiver protector tube or 10 millicuries or less of tritium per any other electron tube;

- (b) 1 microcurie or less of cobalt-60;
- (c) 5 microcuries or less of nickel-63;
- (d) 30 microcuries or less of krypton-85;
- (e) 5 microcuries or less of cesium-137;
- (f) 30 microcuries or less of promethium-147;
- (g) 1 microcurie or less of radium-226;

*Note: For purposes of this subdivision, "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

(7) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one or more but not to exceed 10 exempt sources of radioactive material.

(a) Each individual source shall not exceed 0.05 microcuries of americium-241 or the applicable exempt quantity set forth in WAC 246-232-120, Schedule B.

(b) An individual source may contain more than one radionuclide but the total quantity in the individual source shall not exceed unity based on the sum of the fractional parts of one or more of the exempt quantities set forth in WAC 246-232-120, Schedule B. For purposes of this subsection, 0.05 microcuries of americium-241 is considered an exempt quantity.

(8) Spark gap irradiators containing 1 microcurie or less of cobalt-60 per spark gap irradiator for use in electrically ignited fuel oil burners having a firing rate of at least three gallons (11.4 liters) per hour.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-009, filed 12/29/00, effective 1/29/01.]

WAC 246-232-010 Exempt concentrations and exempt quantities. (1) Exempt concentrations.

(a) Except as provided in (b) of this subsection, a person is exempt from this chapter and chapters 246-233 and 246-235 WAC to the extent that the person receives, possesses, uses, transfers, owns or acquires products or materials containing radioactive material in concentrations less than or equal to those listed in WAC 246-232-130, Schedule C.

(b) No person may introduce radioactive material into a product or material, knowing or having reason to believe, that it will be transferred to persons exempt under (a) of this subsection or equivalent regulations of the United States Nuclear Regulatory Commission, any agreement state or licensing state, except in accordance with a specific license issued under WAC 246-235-105 or the general license provided in WAC 246-232-040.

(2) Exempt quantities.

(a) Except as provided in (b) and (c) of this subsection, a person is exempt from these regulations to the extent that such person receives, possesses, uses, transfers, owns or acquires radioactive material in individual quantities each of which is less than or equal to the applicable quantity set forth in WAC 246-232-120, Schedule B.

(b) This subsection does not authorize the production, packaging or repackaging of radioactive material for pur-

poses of commercial distribution, or the incorporation of radioactive material into products intended for commercial distribution.

(c) No person may, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in WAC 246-232-120, Schedule B, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under subsection (2) of this section or equivalent regulations of the United States Nuclear Regulatory Commission or any agreement state or licensing state, except in accordance with a specific license issued by the United States Nuclear Regulatory Commission, under Section 32.18 of 10 CFR Part 32 or by the department under WAC 246-235-105 which license states that the radioactive material may be transferred by the licensee to persons exempt under subsection (2) of this section or the equivalent regulations of the United States Nuclear Regulatory Commission or any agreement state or licensing state.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-010, filed 12/29/00, effective 1/29/01; 98-13-037, § 246-232-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-190, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-190, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-19-190, filed 12/8/80. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-19-190, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-190.]

WAC 246-232-011 Exemption of certain self-luminous products containing radioactive material(s). (1) Tritium, krypton-85 or promethium-147. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires, and does not manufacture, process, produce, or initially transfer for sale or distribution, self-luminous products containing tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported or initially transferred in accordance with a specific license issued by the United States Nuclear Regulatory Commission under Section 32.22 of 10 C.F.R. Part 32, which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. The exemption in this subsection does not apply to tritium, krypton-85 or promethium-147 used in products primarily for frivolous purposes or in toys or adornments.

(2) Radium-226. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers or owns articles containing less than 0.1 microcurie of radium-226 which were manufactured prior to October 1983.

(2) Radium-226. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers or owns articles containing less than 0.1 microcurie of radium-226 which were manufactured prior to October 1983.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-011, filed 12/29/00, effective 1/29/01.]

WAC 246-232-012 Exemption of certain gas and aerosol detectors containing radioactive material. (1) A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires, and does not manufacture, process or produce, radioactive

(1) A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires, and does not manufacture, process or produce, radioactive

material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards if the detectors have been manufactured, imported, or transferred in accordance with a specific license issued by the United States Nuclear Regulatory Commission* or an agreement state, under Section 32.26 of 10 C.F.R. Part 32, or licensing state under WAC 246-235-105, which authorizes the transfer of the detectors to persons who are exempt from regulatory requirements.

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or by-product material whose subsequent possession, use, transfer and disposal by all other persons are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(2) Gas and aerosol detectors previously manufactured and distributed to general licensees in accordance with a specific license issued by an agreement state shall be considered exempt under subsection (1) of this section if the device is labeled in accordance with the specific license authorizing distribution of the generally licensed device and if the device meets the requirements of WAC 246-235-105.

(3) Gas and aerosol detectors containing naturally occurring and accelerator-produced radioactive material (NARM) previously manufactured and distributed in accordance with a specific license issued by a licensing state shall be considered exempt under subsection (1) of this section if the device is labeled in accordance with the specific license authorizing distribution of the generally licensed device, and if the device meets the requirements of WAC 246-235-105.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-012, filed 12/29/00, effective 1/29/01.]

WAC 246-232-013 Exemption of certain resins containing scandium-46 and designed for sand consolidation in oil wells. A person is exempt from these regulations to the extent that the person receives, possesses, uses, transfers, owns or acquires synthetic plastic resins containing scandium-46 that are designed for sand consolidation in oil wells. The resins shall have been manufactured or imported in accordance with a specific license issued by the United States Nuclear Regulatory Commission or shall have been manufactured in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer of resins under licensing requirements equivalent to those in Sections 32.16 and 32.17 of 10 C.F.R. Part 32 of the regulations of the United States Nuclear Regulatory Commission. This exemption does not authorize the manufacture or initial transfer for sale or distribution of any resins containing scandium-46.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-013, filed 12/29/00, effective 1/29/01.]

WAC 246-232-014 Exemption of C-14 urea diagnostic capsules for human use. (1) Except as provided in subsections (2) and (3) of this section, a person is exempt from the requirements for a license set forth in chapters 246-233 and 246-235 WAC if the person receives, possesses, uses, transfers, owns, or acquires capsules containing 37 kilobecquerels (1 microcurie) carbon-14 urea (allowing for nominal

(2003 Ed.)

variation that may occur during the manufacturing process) each, for "in vivo" diagnostic use for humans.

(2) A person who desires to use the capsules for research involving human subjects shall apply for and receive a specific license under WAC 246-235-080.

(3) A person who desires to manufacture, prepare, process, produce, package, repackage, or transfer for commercial distribution these capsules shall apply for and receive a specific license from the United States Nuclear Regulatory Commission under Section 32.21 of 10 C.F.R. Part 32.

(4) Nothing in this section relieves persons from complying with applicable United States Food and Drug Administration, other federal, and state requirements governing receipt, administration, and use of drugs.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-014, filed 12/29/00, effective 1/29/01.]

WAC 246-232-020 Types of licenses. Licenses for radioactive materials are of two types: General and specific.

(1) General licenses provided in chapter 246-233 WAC are effective without the filing of applications with the department or the issuance of licensing documents to the particular persons, although the filing of a certificate with the department may be required by the particular general license. The general licensee is subject to all other applicable portions of these regulations and any limitations of the general license.

(2) Specific licenses require the submission of an application to the department and the issuance of a licensing document by the department. The licensee is subject to all applicable portions of these regulations as well as any limitations specified in the licensing document. (See chapter 246-235 WAC.)

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-220, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-020.]

WAC 246-232-030 Prelicensing inspection. The department may verify information contained in applications and secure additional information deemed necessary to make a reasonable determination as to whether to issue a license and whether any special conditions should be attached thereto by visiting the facility or location where radioactive materials would be possessed or used, and by discussing details of the proposed possession or use of the radioactive materials with the applicant or representatives designated by the applicant. Such visits may be made by the department or its duly authorized representatives.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-240, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-200.]

WAC 246-232-040 Reciprocal recognition of licenses. (1) Subject to these regulations, any person who holds a specific license from the United States Nuclear Regulatory Commission or any agreement state or licensing state, and issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity

[Title 246 WAC—p. 337]

and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the activities authorized in such licensing document within this state for a period not in excess of one hundred eighty days in that twelve month period which commences the date approval is granted, and the appropriate fee received, by the department provided that:

(a) The licensing document does not limit the activity authorized by such document to specified installations or locations;

(b) The licensed activity is not conducted in an area under exclusive federal jurisdiction;

(c) The out-of-state licensee notifies the department in writing and pays or has paid the appropriate fee (refer to chapter 246-254 WAC), at least three days prior to each entry to the state to engage in such activity. The written notification must be sent to the Radioactive Materials Section, Department of Health, Mailstop 47827, Olympia, Washington 98504-7827 and the fee should be sent to Washington State Department of Health, Revenue Accounting, P.O. Box 1099, Olympia, Washington 98504. Such notification shall indicate the location, period, and type of proposed possession and use within the state, and shall be accompanied by copies of the pertinent licensing documents. If, for a specific case, the three-day period would impose an undue hardship on the out-of-state licensee, the licensee may, upon telephone application to the department (360 236-3220), obtain permission to proceed sooner. The department may waive the requirement for filing additional written notifications during the remainder of the twelve months following the receipt of the initial notification from a person engaging in activities under the general license provided in this subsection;

(d) The out-of-state licensee complies with all applicable regulations of the department and with all the terms and conditions of the licensing document, except any such terms and conditions which may be inconsistent with applicable regulations of the department;

(e) The out-of-state licensee supplies such other information as the department may request; and

(f) The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in this subsection except by transfer to a person:

(i) Specifically licensed by the department or by the United States Nuclear Regulatory Commission, an agreement state or a licensing state to receive such material; or

(ii) Exempt from the requirements for a license for such material under WAC 246-232-010(1).

(2) Notwithstanding the provisions of subsection (1) of this section, any person who holds a specific license issued by the United States Nuclear Regulatory Commission, an agreement state or a licensing state authorizing the holder to manufacture, transfer, install, or service a device described in WAC 246-233-020(4) within the areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate or service a device in this state in areas not under exclusive federal jurisdiction provided that:

(a) Such person shall file a report with the department within thirty days after the end of each calendar quarter in

which any device is transferred to or installed in this state. Each such report shall identify each general licensee to whom such device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device;

(b) The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to such person by the United States Nuclear Regulatory Commission, an agreement state or a licensing state;

(c) Such person shall assure that any labels required to be affixed to the device under regulations of the authority which licensed manufacture of the device bear a statement that "Removal of this label is prohibited"; and

(d) The holder of the specific license shall furnish to each general licensee to whom such device is transferred or on whose premises such device is installed a copy of the general license contained in WAC 246-233-020(4).

(3) The department may withdraw, limit, or qualify its acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed pursuant to such licensing document, upon determining that such action is necessary in order to prevent undue hazard to public health and safety or property.

[Statutory Authority: RCW 70.98.050, 01-02-068, § 246-232-040, filed 12/29/00, effective 1/29/01; 99-15-105, § 246-232-040, filed 7/21/99, effective 8/21/99; 98-13-037, § 246-232-040, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-19-250, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-250, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-19-250, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-250, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-210.]

WAC 246-232-050 Terms and conditions of licenses.

(1) Each license issued pursuant to this part shall be subject to all the provisions of the act, as now or hereafter in effect, and to all rules, regulations, and orders of the department.

(2) No license issued or granted under chapters 246-233 and 246-235 WAC and no right to possess or utilize radioactive material granted by any license issued pursuant to chapters 246-233 and 246-235 WAC shall be transferred, assigned, or in any manner disposed, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the department shall, after securing full information find that the transfer is in accordance with the provisions of the act, and shall give its consent in writing.

(3) Each person licensed by the department pursuant to chapters 246-233 and 246-235 WAC shall confine use and possession of the material licensed to the locations and purposes authorized by the license.

(4) Approval of licensee's procedures by the department does not release the licensee from responsibility if adherence to these procedures results in undue exposure to individuals or loss of control of radioactive material.

(5) Each licensee shall notify the department of health, division of radiation protection, in writing, within five work-

ing days following the filing of a voluntary or involuntary petition for bankruptcy by or against:

- (a) The licensee;
 - (b) A person controlling the licensee or listing the license or licensee as property of the estate; or
 - (c) An affiliate of the licensee.
- (6) This notification must include:
- (a) The bankruptcy court in which the petition for bankruptcy was filed;
 - (b) The date of the filing of the petition;
 - (c) A complete and detailed inventory of all radioactive material possessed under the license including nuclide, form, activity and planned disposition;
 - (d) An estimation of the type and quantities of radioactive material the licensee plans to continue to receive and/or use on a routine basis;
 - (e) A description of security and storage for the radioactive material currently possessed;
 - (f) A plan for radioactive waste disposal, the estimated completion date(s), and the cost;
 - (g) An evaluation of facility and equipment contamination, estimate of clean up costs, and a decontamination plan which includes a thorough description of how the clean up will be funded and how it will be accomplished;
 - (h) An organizational chart specifying sole owners, partnerships, or officers in the corporation who have legal and fiscal responsibilities for the licensee;
 - (i) A description of any other changes affecting the terms and conditions of the radioactive materials license.
- (7) Each licensee shall notify the department within five working days if any items in subsection (6) of this section change during bankruptcy proceedings.
- (8) The department will consider clean up costs as part of the licensee's administrative costs if decontamination is necessary to comply with these regulations;
- (9) For the purposes of this section, "affiliate" means:
- (a) A person as defined in WAC 246-220-010 that directly or indirectly owns, controls, or holds with power to vote, twenty percent or more of the outstanding voting securities of the licensee (unless that person holds such securities (i) in a fiduciary or agency capacity without sole discretionary power to vote such securities, or (ii) solely to secure a debt, if such person has not in fact exercised such power to vote);
 - (b) A corporation, twenty percent or more of whose outstanding voting securities are directly or indirectly owned, controlled, or held with power to vote, by the licensee;
 - (c) A person whose business is operated under a lease or operating agreement by a licensee, or person substantially all of whose property is operated under an operating agreement with the licensee; or
 - (d) A person that operates the business or substantially all of the property of the licensee under a lease or operating agreement.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-232-050, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-300, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-300, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-19-300, filed 12/8/80. Statutory Authority: RCW

(2003 Ed.)

70.98.080. 79-12-073 (Order 1459), § 402-19-300, filed 11/30/79, effective 1/1/80.]

WAC 246-232-060 Termination of licenses and decommissioning of sites and separate buildings or outdoor areas. (1) Each specific licensee shall immediately notify the department in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license and request termination of the license. This notification and request for termination of the license must include the reports and information specified in subsection (3)(c) and (d) of this section. The licensee is subject to the provisions of subsections (3) and (4) of this section, as applicable.

(2) No less than thirty days before the expiration date specified in a specific license, the licensee shall either:

(a) Submit an application for license renewal under WAC 246-235-050; or

(b) Notify the department in writing if the licensee decides not to renew the license.

(3) If a specific licensee does not submit an application for license renewal under WAC 246-235-050, the licensee shall on or before the expiration date specified in the license:

(a) Terminate use of radioactive material;

(b) Properly dispose of radioactive material;

(c) Submit a completed departmental form "Certificate of disposition of radioactive material" or equivalent; and

(d) Submit a radiation survey report to confirm the absence of radioactive materials or establish the levels of radioactive contamination, unless the department determines a radiation survey report is not necessary.

(i) If no radioactive contamination attributable to activities conducted under the license is detected, the licensee shall submit a certification that no detectable radioactive contamination was found. If the information submitted under this paragraph and subsection (3)(c) and (d) of this section is adequate, the department will notify the licensee in writing that the license is terminated.

(ii) If detectable levels of radioactive contamination attributable to activities conducted under the license are found, the license continues in effect beyond the expiration date, if necessary, with respect to possession of residual radioactive material present as contamination until the licensee meets the criteria established in chapter 246-246 WAC and the department notifies the licensee in writing that the license is terminated. During this time, the licensee is subject to the provisions of subsection (4) of this section. In addition to the information submitted under subsection (3)(c) and (d) of this section, the licensee shall submit a plan for decontamination, if necessary.

(4) Each specific licensee who possesses residual radioactive material under subsection (3)(d)(ii) of this section, following the expiration of the facility and/or equipment date specified in the license, shall:

(a) Be limited to actions, involving radioactive material related to decontamination and preparation for release in accordance with chapter 246-246 WAC; and

(b) Continue to control entry to restricted areas until:

(i) Such areas are suitable for release in accordance with chapter 246-246 WAC;

(ii) Contaminated equipment complies with guidance contained in WAC 246-232-140, Schedule D; and

(iii) The department notifies the licensee in writing that the license is terminated.

(5) Each general licensee licensed under the provisions of WAC 246-233-020(8), shall immediately notify the department in writing when the licensee decides to discontinue all activities involving radioactive materials authorized under the general license. Such notification shall include a description of how the generally licensed material was disposed and the results of facility surveys, if applicable, to confirm the absence of radioactive materials.

(6) Within sixty days of the occurrence of any of the following, each specific licensee shall provide notification to the department in writing of such occurrence, and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity so that the site, building, or outdoor area is suitable for release in accordance with chapter 246-246 WAC, or submit within twelve months of notification a decommissioning plan, if required by subsection (10)(a) of this section, and begin decommissioning upon approval of that plan if:

(a) The license has expired or has been revoked by the department; or

(b) The licensee has decided to permanently cease principal activities, as defined in this section, at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the site, building, or outdoor area is unsuitable for release in accordance with chapter 246-246 WAC; or

(c) No principal activities under the license have been conducted for a period of twenty-four months; or

(d) No principal activities have been conducted for a period of twenty-four months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with chapter 246-246 WAC.

(7) As used in this section, principal activities means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

(8) Coincident with the notification required by subsection (6) of this section, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to WAC 246-235-075 or as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to subsection (10)(d)(v) of this section. Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the department.

(9) The department may grant a request to extend the time periods established in subsection (6) of this section if the department determines that this relief is not detrimental to the public health and safety and is otherwise in the public inter-

est. The request must be submitted no later than thirty days before notification pursuant to subsection (6) of this section. The schedule for decommissioning set forth in subsection (6) of this section may not commence until the department has made a determination on the request.

(10)(a) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the department and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(i) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(ii) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(iii) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(iv) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(b) The department may approve an alternate schedule for submittal of a decommissioning plan required pursuant to subsection (6) of this section if the department determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

(c) Procedures such as those listed in (a) of this subsection with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

(d) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(i) A description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(ii) A description of planned decommissioning activities;

(iii) A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey;

(v) An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning;

(vi) A description of the physical security plan and material control and accounting plan provisions in place during decommissioning;

(vii) For decommissioning plans calling for completion of decommissioning later than twenty-four months after plan approval, the plan shall include a justification for the delay based on the criteria in subsection (12) of this section.

(e) The proposed decommissioning plan will be approved by the department if the information therein demonstrates that the decommissioning will be completed as soon as practicable and that the health and safety of workers and the public will be adequately protected.

(11)(a) Except as provided in subsection (12) of this section, licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than twenty-four months following the initiation of decommissioning.

(b) Except as provided in subsection (12) of this section, when decommissioning involves the entire site, the licensee shall request license termination as soon as practicable but no later than twenty-four months following the initiation of decommissioning.

(12) The department may approve a request for an alternative schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the department determines that the alternative is warranted by consideration of the following:

(a) Whether it is technically feasible to complete decommissioning within the allotted twenty-four-month period;

(b) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted twenty-four-month period;

(c) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(d) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(e) Other site-specific factors which the department may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground water treatment activities, monitored natural ground water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(13) As the final step in decommissioning, the licensee shall:

(a) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed certificate of disposition of radioactive material or equivalent information; and

(b) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in chapter 246-246 WAC. The licensee shall, as appropriate:

(i) Report levels of gamma radiation in units of millisieverts (microrentgen) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (disintegrations per minute or microcuries) per one hundred square centimeters—removable and fixed—for surfaces, megabecquerels (microcuries) per milliliter for water, and becquerels (picocuries) per gram for solids such as soils or concrete; and

(ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(14) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the department determines that:

(a) Radioactive material has been properly disposed;

(b) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(c)(i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in chapter 246-246 WAC; or

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in chapter 246-246 WAC; and

(d) Records required by subsections (16) and (18) of this section have been received.

(15) Specific licenses for uranium and thorium milling are exempt from subsections (6)(d), (9) and (10) of this section with respect to reclamation of tailings impoundments and/or waste disposal areas.

(16) Prior to license termination, each licensee authorized to possess radioactive material with a half-life greater than one hundred twenty days, in an unsealed form, shall forward the following records to the department:

(a) Records of disposal required by WAC 246-221-230 (8)(a); and

(b) Records of results required by WAC 246-221-230 (7)(h).

(17) If licensed activities are transferred or assigned in accordance with WAC 246-232-050(2), each licensee authorized to possess radioactive material, with a half-life greater than one hundred twenty days, in an unsealed form, shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(a) Records of disposal required by WAC 246-221-230 (8)(a); and

(b) Records of results required by WAC 246-221-230 (7)(h).

(18) Prior to license termination, each licensee shall forward the records required by WAC 246-235-075(6) to the department.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-232-060, filed 3/15/00, effective 4/15/00; 99-15-105, § 246-232-060, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 97-08-095, § 246-232-060, filed 4/2/97, effective 5/3/97; 91-15-112 (Order 184), § 246-232-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-330, filed 9/16/83.]

WAC 246-232-070 Modification and revocation of licenses. (1) The terms and conditions of all licenses shall be subject to amendment, revision, or modification, or the license may be suspended or revoked by reason of amendments to the act, or by reason of rules, regulations, and orders issued by the department.

(2) Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under provisions of the act, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the department to refuse to grant a license on an original application, or for violation of, or failure to observe any of the terms and conditions of the

act, or of the license, or of any rule, regulation, or order of the department.

(3) Except in cases of willful disregard for the regulations or applicable license conditions or those in which the public health, interest, or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefore, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-19-350, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-350, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-350, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-180.]

WAC 246-232-080 Transfer of material. (1) No licensee shall transfer radioactive material except as authorized pursuant to this section.

(2) Except as otherwise provided in the license and subject to the provisions of this section, any licensee may transfer radioactive material:

(a) To the department. A licensee may transfer material to the department only after receiving prior approval from the department;

(b) To the United States Department of Energy;

(c) To any person exempt from the regulations in this part to the extent permitted under such exemption;

(d) To any person authorized to receive such material under terms of a general license or its equivalent, or a specific license or equivalent licensing document, issued by the department, the United States Nuclear Regulatory Commission, any agreement state or any licensing state, or to any person otherwise authorized to receive such material by the federal government or any agency thereof, the department, any agreement state or any licensing state; or

(e) As otherwise authorized by the department in writing.

(3) Before transferring radioactive material to a specific licensee of the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state, or to a general licensee who is required to register with the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state prior to receipt of the radioactive material, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred.

(4) The following methods for the verification required by subsection (3) of this section are acceptable:

(a) The transferor may obtain for possession, and read, a current copy of the transferee's specific license or registration certificate;

(b) The transferor may obtain for possession a written certification from the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date;

(c) For emergency shipments the transferor may accept oral certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date: Provided, That the oral certification is confirmed in writing within ten days;

(d) The transferor may obtain other sources of information compiled by a reporting service from official records of the department, the United States Nuclear Regulatory Commission, the licensing agency of an agreement state or a licensing state as to the identity of licensees and the scope and expiration dates of licenses and registration; or

(e) When none of the methods of verification described in subsection (4) of this section are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the department, the United States Nuclear Regulatory Commission, or the licensing agency of an agreement state or a licensing state that the transferee is licensed to receive the radioactive material.

(5) Preparation for shipment and transport of radioactive material shall be in accordance with the provisions of WAC 246-232-090.

(6) The requirements of subsection (4) of this section notwithstanding, no verification is required when returning used, unused or decayed sources of radiation to the original manufacturer, (e.g., industrial radiography sources, teletherapy sources, portable moisture/density gauge sources, fixed gauge sources, and Mo-99/Tc-99m generators).

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-19-400, filed 12/11/86. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-19-400, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-400, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-170.]

WAC 246-232-090 Transportation. No person shall deliver radioactive material to a carrier for transport or transport radioactive material except as authorized in a general or specific license issued by the department or as exempted in chapter 246-231 WAC. General licenses for transportation of radioactive material and other transportation requirements are found in chapter 246-231 WAC.

[Statutory Authority: RCW 70.98.050, 99-15-105, § 246-232-090, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-232-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-232-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-19-500, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-19-500, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-19-500, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-220.]

WAC 246-232-120 Schedule B, exempt quantities of radioactive materials. (See also WAC 246-232-010(2).)

Radioactive Material	Microcuries
Antimony-122 (Sb-122)	100
Antimony-124 (Sb-124)	10
Antimony-125 (Sb-125)	10
Arsenic-73 (As-73)	100
Arsenic-74 (As-74)	10
Arsenic-76 (As-76)	10
Arsenic-77 (As-77)	100
Barium-131 (Ba-131)	10
Barium-133 (Ba-133)	10
Barium-140 (Ba-140)	10
Bismuth-210 (Bi-210)	1
Bromine-82 (Br-82)	10
Cadmium-109 (Cd-109)	10
Cadmium-115m (Cd-115m)	10
Cadmium-115 (Cd-115)	100
Calcium-45 (Ca-45)	10
Calcium-47 (Ca-47)	10
Carbon-14 (C-14)	100
Cerium-141 (Ce-141)	100
Cerium-143 (Ce-143)	100
Cerium-144 (Ce-144)	1
Cesium-129 (Cs-129)	100
Cesium-131 (Cs-131)	1,000
Cesium-134m (Cs-134m)	100
Cesium-134 (Cs-134)	1
Cesium-135 (Cs-135)	10
Cesium-136 (Cs-136)	10
Cesium-137 (Cs-137)	10
Chlorine-36 (Cl-36)	10
Chlorine-38 (Cl-38)	10
Chromium-51 (Cr-51)	1,000
Cobalt-57 (Co-57)	100
Cobalt-58m (Co-58m)	10
Cobalt-58 (Co-58)	10
Cobalt-60 (Co-60)	1
Copper-64 (Cu-64)	100
Dysprosium-165 (Dy-165)	10
Dysprosium-166 (Dy-166)	100
Erbium-169 (Er-169)	100
Erbium-171 (Er-171)	100
Europium-152 (Eu-152) 9.2h	100
Europium-152 (Eu-152) 13 yr	1
Europium-154 (Eu-154)	1
Europium-155 (Eu-155)	10
Fluorine-18 (F-18)	1,000
Gadolinium-153 (Gd-153)	10
Gadolinium-159 (Gd-159)	100
Gallium-67 (Ga-67)	100
Gallium-72 (Ga-72)	10
Germanium-71 (Ge-71)	100
Gold-198 (Au-198)	100
Gold-199 (Au-199)	100
Hafnium-181 (Hf-181)	10
Holmium-166 (Ho-166)	100
Hydrogen-3 (H-3)	1,000
Indium-111 (In-111)	100

Radioactive Material	Microcuries
Indium-113m (In-113m)	100
Indium-114m (In-114m)	10
Indium-115m (In-115m)	100
Indium-115 (In-115)	10
Iodine-123 (I-123)	100
Iodine-125 (I-125)	1
Iodine-126 (I-126)	1
Iodine-129 (I-129)	0.1
Iodine-131 (I-131)	1
Iodine-132 (I-132)	10
Iodine-133 (I-133)	1
Iodine-134 (I-134)	10
Iodine-135 (I-135)	10
Iridium-192 (Ir-192)	10
Iridium-194 (Ir-194)	100
Iron-52 (Fe-52)	10
Iron-55 (Fe-55)	100
Iron-59 (Fe-59)	10
Krypton-85 (Kr-85)	100
Krypton-87 (Kr-87)	10
Lanthanum-140 (La-140)	10
Lutetium-177 (Lu-177)	100
Manganese-52 (Mn-52)	10
Manganese-54 (Mn-54)	10
Manganese-56 (Mn-56)	10
Mercury-197m (Hg-197m)	100
Mercury-197 (Hg-197)	100
Mercury-203 (Hg-203)	10
Molybdenum-99 (Mo-99)	100
Neodymium-147 (Nd-147)	100
Neodymium-149 (Nd-149)	100
Nickel-59 (Ni-59)	100
Nickel-63 (Ni-63)	10
Nickel-65 (Ni-65)	100
Niobium-93m (Nb-93m)	10
Niobium-95 (Nb-95)	10
Niobium-97 (Nb-97)	10
Osmium-185 (Os-185)	10
Osmium-191m (Os-191m)	100
Osmium-191 (Os-191)	100
Osmium-193 (Os-193)	100
Palladium-103 (Pd-103)	100
Palladium-109 (Pd-109)	100
Phosphorus-32 (P-32)	10
Platinum-191 (Pt-191)	100
Platinum-193m (Pt-193m)	100
Platinum-193 (Pt-193)	100
Platinum-197m (Pt-197m)	100
Platinum-197 (Pt-197)	100
Polonium-210 (Po-210)	0.1
Potassium-42 (K-42)	10
Potassium-43 (K-43)	10
Praseodymium-142 (Pr-142)	100
Praseodymium-143 (Pr-143)	100
Promethium-147 (Pm-147)	10
Promethium-149 (Pm-149)	10
Radium-226 (Ra-226)	0.1
Rhenium-186 (Re-186)	100
Rhenium-188 (Re-188)	100

Radioactive Material	Microcuries	Radioactive Material	Microcuries
Rhodium-103m (Rh-103m)	100	Yttrium-90 (Y-90)	10
Rhodium-105 (Rh-105)	100	Yttrium-91 (Y-91)	10
Rubidium-81 (Rb-81)	10	Yttrium-92 (Y-92)	100
Rubidium-86 (Rb-86)	10	Yttrium-93 (Y-93)	100
Rubidium-87 (Rb-87)	10	Zinc-65 (Zn-65)	10
Ruthenium-97 (Ru-97)	100	Zinc-69m (Zn-69m)	100
Ruthenium-103 (Ru-103)	10	Zinc-69 (Zn-69)	1,000
Ruthenium-105 (Ru-105)	10	Zirconium-93 (Zr-93)	10
Ruthenium-106 (Ru-106)	1	Zirconium-95 (Zr-95)	10
Samarium-151 (Sm-151)	10	Zirconium-97 (Zr-97)	10
Samarium-153 (Sm-153)	100	Any radioactive material not listed above	
Scandium-46 (Sc-46)	10	other than alpha emitting radioactive	
Scandium-47 (Sc-47)	100	material	0.1
Scandium-48 (Sc-48)	10		
Selenium-75 (Se-75)	10		
Silicon-31 (Is-31)	100		
Silver-105 (Ag-105)	10		
Silver-110m (Ag-110m)	1		
Silver-111 (Ag-111)	100		
Sodium-22 (Na-22)	10		
Sodium-24 (Na-24)	10		
Strontium-85 (Sr-85)	10		
Strontium-89 (Sr-89)	1		
Strontium-90 (Sr-90)	0.1		
Strontium-91 (Sr-91)	10		
Strontium-92 (Sr-92)	10		
Sulphur-35 (S-35)	100		
Tantalum-182 (Ta-182)	10		
Technetium-96 (Tc-96)	10		
Technetium-97m (Tc-97m)	100		
Technetium-97 (Tc-97)	100		
Technetium-99m (Tc-99m)	100		
Technetium-99 (Tc-99)	10		
Tellurium-125m (Te-125m)	10		
Tellurium-127m (Te-127m)	10		
Tellurium-127 (Te-127)	100		
Tellurium-129m (Te-129m)	10		
Tellurium-129 (Te-129)	100		
Tellurium-131m (Te-131m)	10		
Tellurium-132 (Te-132)	10		
Terbium-160 (Tb-160)	10		
Thallium-200 (Tl-200)	100		
Thallium-201 (Tl-201)	100		
Thallium-202 (Tl-202)	100		
Thallium-204 (Tl-204)	10		
Thulium-170 (Tm-170)	10		
Thulium-171 (Tm-171)	10		
Tin-113 (Sn-113)	10		
Tin-125 (Sn-125)	10		
Tungsten-181 (W-181)	10		
Tungsten-185 (W-185)	10		
Tungsten-187 (W-187)	100		
Vanadium-48 (V-48)	10		
Xenon-131m (Xe-131m)	1,000		
Xenon-133 (Xe-133)	100		
Xenon-135 (Xe-135)	100		
Ytterbium-169 (Yb-169)	10		
Ytterbium-175 (Yb-175)	100		
Yttrium-87 (Y-87)	10		

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-120, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-550, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-550, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-240.]

WAC 246-232-130 Schedule C, exempt concentrations. (See WAC 246-232-010(1).)

Element (atomic number)	Isotope	Column I Gas concentration $\mu\text{Ci}/\text{ml}^1$	Column II Liquid and solid concentration $\mu\text{Ci}/\text{ml}^2$
Antimony (51)	Sb-122		3×10^{-4}
	Sb-124		2×10^{-4}
	Sb-125		1×10^{-3}
Argon (18)	Ar-37	1×10^{-3}	
	Ar-41	4×10^{-7}	
Arsenic (33)	As-73		5×10^{-3}
	As-74		5×10^{-4}
	As-76		2×10^{-4}
	As-77		8×10^{-4}
Barium (56)	Ba-131		2×10^{-3}
	Ba-140		3×10^{-4}
Beryllium (4)	Be-7		2×10^{-2}
Bismuth (83)	Bi-206		4×10^{-4}
Bromine (35)	Br-82	4×10^{-7}	3×10^{-3}
Cadmium (48)	Cd-109		2×10^{-3}
	Cd-115m		3×10^{-4}
	Cd-115		3×10^{-4}
Calcium (20)	Ca-45		9×10^{-5}
	Ca-47		5×10^{-4}
Carbon (6)	C-14	1×10^{-6}	8×10^{-3}
Cerium (58)	Ce-141		9×10^{-4}
	Ce-143		4×10^{-4}
	Ce-144		1×10^{-4}
Cesium (55)	Cs-131		2×10^{-2}
	Cs-134m		6×10^{-2}
	Cs-134		9×10^{-5}
Chlorine (17)	Cl-38	9×10^{-7}	4×10^{-3}
Chromium (24)	Cr-51		2×10^{-2}
Cobalt (27)	Co-57		5×10^{-3}
	Co-58		1×10^{-3}
	Co-60		5×10^{-4}
Copper (29)	Cu-64		3×10^{-3}
Dysprosium (66)	Dy-165		4×10^{-3}
	Dy-166		4×10^{-4}

Element (atomic number)	Isotope	Column I Gas con- centra- tion $\mu\text{Ci/ml}^1$	Column II Liquid and solid concen- tration $\mu\text{Ci/ml}^2$	Element (atomic number)	Isotope	Column I Gas con- centra- tion $\mu\text{Ci/ml}^1$	Column II Liquid and solid concen- tration $\mu\text{Ci/ml}^2$
Erbium (68)	Er-169		9×10^{-4}	Rhenium (75)	Re-183		6×10^{-3}
	Er-171		1×10^{-3}		Re-186		9×10^{-4}
Europium (63)	Eu-152		6×10^{-4}		Re-188		6×10^{-4}
	(9.2 h)			Rhodium (45)	Rh-103m		1×10^{-1}
	Eu-155		2×10^{-3}		Rh-105		1×10^{-3}
Fluorine (9)	F-18	2×10^{-6}	8×10^{-3}	Rubidium	Rb-86		7×10^{-4}
Gadolinium (64)	Gd-153		2×10^{-3}	Ruthenium (44)	Ru-97		4×10^{-3}
	Gd-159		8×10^{-4}		Ru-103		8×10^{-4}
Gallium (31)	Ga-72		4×10^{-4}		Ru-105		1×10^{-3}
Germanium (32)	Ge-71		2×10^{-2}		Ru-106		1×10^{-4}
Gold (79)	Au-196		2×10^{-3}	Samarium (62)	Sm-153		8×10^{-4}
	Au-198		5×10^{-4}	Scandium (21)	Sc-46		4×10^{-4}
	Au-199		2×10^{-3}		Sc-47		9×10^{-4}
Hafnium (72)	Hf-181		7×10^{-4}		Sc-48		3×10^{-4}
Hydrogen (1)	H-3	5×10^{-6}	3×10^{-2}	Selenium (34)	Se-75		3×10^{-3}
Indium (49)	In-113m		1×10^{-2}	Silicon (14)	Si-31		9×10^{-3}
	In-114m		2×10^{-4}	Silver (47)	Ag-105		1×10^{-3}
Iodine (53)	I-125	3×10^{-9}	2×10^{-5}		Ag-110m		3×10^{-4}
	I-126	3×10^{-9}	2×10^{-5}		Ag-111		4×10^{-4}
	I-131	3×10^{-9}	2×10^{-5}	Sodium (11)	Na-24		2×10^{-3}
	I-132	8×10^{-8}	6×10^{-4}	Strontium (38)	Sr-85		1×10^{-3}
	I-133	1×10^{-8}	7×10^{-5}		Sr-89		1×10^{-4}
	I-134	2×10^{-7}	1×10^{-3}		Sr-91		7×10^{-4}
Iridium (77)	Ir-190		2×10^{-3}		Sr-92		7×10^{-4}
	Ir-192		4×10^{-4}	Sulfur (16)	S-35	9×10^{-8}	6×10^{-4}
	Ir-194		3×10^{-4}	Tantalum (73)	Ta-182		4×10^{-4}
Iron (26)	Fe-55		8×10^{-3}	Technetium (43)	Tc-96m		1×10^{-1}
	Fe-59		6×10^{-4}		Tc-96		1×10^{-3}
Krypton (36)	Kr-85m	1×10^{-6}		Tellurium (52)	Te-125m		2×10^{-3}
	Kr-85		3×10^{-6}		Te-127m		6×10^{-4}
Lanthanum (57)	La-140		2×10^{-4}		Te-127		3×10^{-3}
Lead (82)	Pb-203		4×10^{-3}		Te-129m		3×10^{-4}
Lutetium (71)	Lu-177		1×10^{-3}		Te-131m		6×10^{-4}
Manganese (25)	Mn-52		3×10^{-4}		Te-132		3×10^{-4}
	Mn-54		1×10^{-3}		Te-132		3×10^{-4}
	Mn-56		1×10^{-3}	Terbium (65)	Tb-160		4×10^{-4}
Mercury (80)	Hg-197m		2×10^{-3}	Thallium (81)	Tl-200		4×10^{-3}
	Hg-197		3×10^{-3}		Tl-201		3×10^{-3}
	Hg-203		2×10^{-4}		Tl-202		1×10^{-3}
Molybdenum (42)	Mo-99		2×10^{-3}		Tl-204		1×10^{-3}
Neodymium (60)	And-147		6×10^{-4}	Thulium (69)	Tm-170		5×10^{-4}
	And-149		3×10^{-3}		Tm-171		5×10^{-3}
Nickel (28)	Ni-65		1×10^{-3}	Tin (50)	Sn-113		9×10^{-4}
Niobium (Colum- bium)(41)	Nb-95		1×10^{-3}		Sn-125		2×10^{-4}
	Nb-97		9×10^{-3}	Tungsten (Wolfram) (74)	W-181		4×10^{-3}
Osmium (76)	So-185		7×10^{-4}	Vanadium (23)	W-187		7×10^{-4}
	So-191m		3×10^{-2}	Xenon (54)	V-48		3×10^{-4}
	So-191		2×10^{-3}		Xe-131m	4×10^{-6}	
	So-193		6×10^{-4}		Xe-133	3×10^{-6}	
Palladium (46)	Pd-103		3×10^{-3}		Xe-135	1×10^{-6}	
	Pd-109		9×10^{-4}	Ytterbium (70)	Yb-175		1×10^{-3}
Phosphorus (15)	P-32		2×10^{-4}	Yttrium (39)	Y-90		2×10^{-4}
Platinum (78)	Pt-191		1×10^{-3}		Y-91m		3×10^{-2}
	Pt-193m		1×10^{-2}		Y-91		3×10^{-4}
	Pt-197m		1×10^{-2}		Y-92		6×10^{-4}
	Pt-197		1×10^{-3}		Y-93		3×10^{-4}
Potassium (19)	K-42		3×10^{-3}	Zinc (30)	Zn-65		1×10^{-3}
Praseodymium (59)	Pr-142		3×10^{-4}		Zn-69m		7×10^{-4}
	Pr-143		5×10^{-4}		Zn-69		2×10^{-2}
Promethium (61)	Pm-147		2×10^{-3}	Zirconium (40)	Zr-95		6×10^{-4}
	Pm-149		4×10^{-4}		Zr-97		2×10^{-4}
Radium (88)	Ra-226		1×10^{-7}				
	Ra-228		3×10^{-7}	Beta and/or gamma emitting radioac- tive material not listed above with half-life less than 3 years		1×10^{-10}	1×10^{-6}

- Notes: ¹ Values are given in Column I only for those materials normally used as gases
² $\mu\text{Ci/gm}$ for solids
- Note 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule C the activity stated is that of the parent isotope and takes into account the daughters.
- Note 2: For purposes of WAC 246-232-010(1) where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule C for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

Example:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

WAC 246-232-140 Schedule D.

ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES A	AVERAGE B C F	MAXIMUM B D F	REMOVABLE B E F WIPE LIMITS
U-nat, U-235, U-238, and associated decay products	5,000 dpm α /100 cm ²	15,000 dpm α /100 cm ²	1,000 dpm α /100 cm ²
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm ²	300 dpm/100 cm ²	20 dpm/100 cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm ²	3000 dpm/100 cm ²	200 dpm/100 cm ²
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except SR-90 and others noted above	5000 dpm $\beta\gamma$ /100 cm ²	15,000 dpm $\beta\gamma$ /100 cm ²	1000 dpm $\beta\gamma$ /100 cm ²

- A Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.
- B As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
- C Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.
- D The maximum contamination level applies to an area of not more than 100 cm².
- E The amount of removable radioactive material per 100 cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.
- F The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-590, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-590, filed 9/16/83.]

WAC 246-232-990 Fees. Fees are required from all applicants, licensees, or registrants. Chapter 246-254 WAC

Note 3: For the purpose of determining concentration in a product or device, the total quantity of radioactive material present is divided by only that weight or volume of the discrete part or component throughout which the radioactive material is relatively uniformly distributed. If the weight or volume of this part or component cannot be determined then the product or device should be evaluated on the basis of the total quantity of radioactive material present.

[Statutory Authority: RCW 70.98.050. 01-02-068, § 246-232-130, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-19-580, filed 12/11/86; 83-19-050 (Order 2026), § 402-19-580, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-580, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-250.]

specifies fees for users of radiation subject to regulation under chapters 246-220 through 246-255 WAC.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-232-990, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-232-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-19-370, filed 9/16/83; 79-12-073 (Order 1459), § 402-19-370, filed 11/30/79, effective 1/1/80.]

**Chapter 246-233 WAC
 RADIOACTIVE MATERIALS—GENERAL
 LICENSES**

WAC	
246-233-001	Purpose and scope.
246-233-010	General licenses—Source material.
246-233-020	General licenses—Radioactive material other than source material.

WAC 246-233-001 Purpose and scope. This chapter establishes general licenses for the possession and use of radioactive material contained in certain items and a general license for ownership of radioactive material. Chapter 246-232 WAC also contains provisions applicable to the subject matter of this part.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-233-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-233-001, filed

12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-21-010, filed 11/30/79, effective 1/1/80. Formerly chapter 402-20 WAC.]

WAC 246-233-010 General licenses—Source material. (1) A general license is hereby issued authorizing use, possession, and transfer of not more than fifteen pounds of source material at any one time by persons in the following categories:

(a) Pharmacists using the source material solely for the preparation of medicinal compounds;

(b) Physicians using the source material for medicinal purposes;

(c) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs;

(d) Commercial and industrial firms, and research, educational, and medical institutions, and state and local government agencies for research, development, educational, operational, or commercial purposes: And provided, That no such person shall, pursuant to this general license, receive more than a total of one hundred fifty pounds of source material in any one calendar year.

(2) Persons who receive, possess, use, or transfer source material pursuant to the general license issued in subsection (1) of this section are exempt from the provisions of chapters 246-221 and 246-222 WAC to the extent that such receipt, possession, use, or transfer is within the terms of such general license: Provided, however, That this exemption shall not be deemed to apply to any such person who is also in possession of source material under a specific license issued pursuant to chapter 246-235 WAC.

(3) A general license is hereby issued authorizing the receipt of title to source material without regard to quantity. This general license does not authorize any person to receive, possess, use, or transfer source material.

(4) Depleted uranium in industrial products and devices.

(a) A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of paragraphs (4)(b), (c), (d), and (e) of this section, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

(b) The general license in paragraph (4)(a) of this section applies only to industrial products or devices which have been manufactured either in accordance with a specific license issued to the manufacturer of the products or devices pursuant to WAC 246-235-091 or in accordance with a specific license issued to the manufacturer by the United States Nuclear Regulatory Commission or an agreement state which authorizes manufacture of the products or devices for distribution to persons generally licensed by the United States Nuclear Regulatory Commission or an agreement state.

(c)(i) Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph (4)(a) of this section shall file department form RHF-20 "Registration certificate - Use of depleted uranium under general license," with the department. The form shall be submitted within thirty days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish

on department form RHF-20 the following information and such other information as may be required by that form:

(A) Name and address of the registrant;

(B) A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph (4)(a) of this section and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

(C) Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in item (4)(c)(i)(B) of this section.

(ii) The registrant possessing or using depleted uranium under the general license established by paragraph (4)(a) of this section shall report in writing to the department any changes in information previously furnished on the "Registration certificate - Use of depleted uranium under general license." The report shall be submitted within thirty days after the effective date of such change.

(d) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph (4)(a) of this section:

(i) Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium.

(ii) Shall not abandon such depleted uranium.

(iii) Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provision of chapter 246-232 WAC. In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph (4)(a) of this section the transferor shall furnish the transferee a copy of this regulation and a copy of department form RHF-20.

In the case where the transferee receives the depleted uranium pursuant to a general license contained in the United States Nuclear Regulatory Commission's or agreement state's regulation equivalent to paragraph (4)(a) of this section the transferor shall furnish the transferee a copy of this regulation and a copy of department form RHF-20 accompanied by a note explaining that use of the product or device is regulated by the United States Nuclear Regulatory Commission or agreement state under requirements substantially the same as those in this regulation.

(iv) Shall maintain and make available to the department upon request the name and address of the person receiving the depleted uranium pursuant to such transfer.

(v) Shall not export such depleted uranium except in accordance with a license issued by the United States Nuclear Regulatory Commission pursuant to 10 CFR Part 110.

(e) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph (4)(a) of this section is exempt from the requirements of chapters 246-221 and 246-222 WAC of these regulations with respect to the depleted uranium covered by that general license.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-233-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-233-010, filed 7/24/91, effective

8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-233-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-21-030, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-21-030, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-030.]

WAC 246-233-020 General licenses*—Radioactive material other than source material.

*Note: Different general licenses are issued in this section, each of which has its own specific conditions and requirements.

(1) **Certain devices and equipment.** A general license is hereby issued to transfer, receive, acquire, own, possess, and use radioactive material incorporated in the following devices or equipment which have been manufactured, tested and labeled by the manufacturer in accordance with a specific license issued to the manufacturer by the United States Nuclear Regulatory Commission for use pursuant to Section 31.3 of 10 CFR Part 31. This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-050, 246-220-060, 246-220-070, chapters 246-232, 246-221** and 246-222 WAC.

(a) **Static elimination device.** Devices designed for use as static eliminators which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of Polonium-210 per device.

(b) **Ion generating tube.** Devices designed for ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of Polonium-210 per device or a total of not more than 50 millicuries of Hydrogen-3 (tritium) per device.

** Attention is directed particularly to the provisions of chapter 246-221 WAC of these regulations which relate to the labeling of containers.

(2) Reserved.

(3) Reserved.

(4) **Certain measuring, gauging or controlling devices.**

(a) A general license is hereby issued to commercial and industrial firms and research, educational and medical institutions, individuals in the conduct of their business, and state or local government agencies to own, acquire, receive, possess, use or transfer, in accordance with the provisions of (b), (c), and (d) of this subsection, radioactive material excluding special nuclear material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere.

(b) The general license in (a) of this subsection applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with the specifications contained in a specific license issued by the department pursuant to WAC 246-235-093 or in accordance with the Nuclear Regulatory Commission, an agreement state or a licensing state, which authorizes distribution of devices to persons generally licensed by the United States Nuclear Regulatory Commission, an agreement state or licensing state**.

*Note: Regulations under the Federal Food, Drug, and Cosmetic Act authorizing the use of radioactive control devices in food production require certain additional labeling thereon which is found in Section 179.21 of 21 CFR Part 179.

(c) Any person who owns, acquires, receives, possesses, uses or transfers radioactive material in a device pursuant to the general license in (a) of this subsection:

(i) Shall assure that all labels affixed to the device at the time of receipt and bearing a statement that removal of the label is prohibited are maintained thereon and shall comply with all instructions and precautions provided by such labels;

(ii) Shall assure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as are specified in the label, however:

(A) Devices containing only krypton need not be tested for leakage of radioactive material; and

(B) Devices containing only tritium or not more than 100 microcuries of other beta and/or gamma emitting material or 10 microcuries of alpha emitting material need not be tested for any purpose. Devices held in storage in the original shipping container prior to initial installation need not be tested until immediately prior to use;

(iii) Shall assure that the tests required by (c)(ii) of this subsection and other testing, installing, servicing, and removing from installation involving the radioactive materials, its shielding or containment, are performed:

(A) In accordance with the instructions provided by the labels; or

(B) By a person holding a specific license from the department or from the United States Nuclear Regulatory Commission or from any agreement state or from a licensing state to perform such activities;

(iv) Shall maintain records showing compliance with the requirements of (c)(ii) and (iii) of this subsection. The records shall show the results of tests. The records also shall show the dates of performance and the names of persons performing, testing, installing, servicing, and removing from installation concerning the radioactive material, its shielding or containment. Records of tests for leakage of radioactive material required by (c)(ii) of this subsection shall be maintained for one year after the next required leak test is performed or the sealed source is transferred or disposed. Records of tests of the on/off mechanism and indicator required by (c)(ii) of this subsection shall be maintained for one year after the next required test of the on/off mechanism and indicator is performed or the sealed source is transferred or disposed. Records of other testing, installation, servicing, and removal from installation required by (c)(iii) of this subsection shall be maintained for a period of two years from the date of the recorded event or until the device is transferred or disposed;

(v) Upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on/off mechanism or indicator, or upon the detection of 0.005 microcuries or more removable radioactive material, shall immediately suspend operation of the device until it has been repaired by the manufacturer or other person holding a specific license from the department, the United States Nuclear Regulatory Commission, or from an agreement state or a licensing state to repair such devices, or disposed by transfer to a person authorized by a specific license to receive the radioactive material

contained in the device and, within thirty days, furnish to the department a written report containing a brief description of the event and the remedial action taken;

(vi) Shall not abandon the device containing radioactive material;

(vii) Except as provided in (c)(viii) of this subsection, shall transfer or dispose the device containing radioactive material only by transfer to a person holding a specific license of the department, the United States Nuclear Regulatory Commission, or an agreement state, or a licensing state whose specific license authorizes the person to receive the device and within thirty days after transfer of a device to a specific licensee shall furnish to the department a report containing identification of the device by manufacturer's name, model number and the name and address of the person receiving the device. No report is required if the device is transferred to the specific licensee in order to obtain a replacement device;

(viii) Shall transfer the device to another general licensee only:

(A) Where the device remains in use at a particular location. In such case, the transferor shall give the transferee a copy of this subsection and any safety documents identified in the label of the device and within thirty days of the transfer, report to the department the manufacturer's name, model number of device transferred, the name and address of the transferee, and the name and/or position of an individual who may constitute a point of contact between the department and the transferee; or

(B) Where the device is held in storage in the original shipping container at its intended location of use prior to initial use by a general licensee:

(ix) Shall comply with the provisions of WAC 246-221-240 and 246-221-250 for reporting radiation incidents, theft or loss of licensed material, but shall be exempt from the other requirements of chapters 246-221 and 246-222 WAC.

(d) The general license in (a) of this subsection does not authorize the manufacture, import or export of devices containing radioactive material.

(e) The general license provided in this subsection is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, and 246-232-090.

(5) Luminous safety devices for aircraft.

(a) A general license is hereby issued to own, receive, acquire, possess and use tritium or Promethium-147 contained in luminous safety devices for use in aircraft, provided:

(i) Each device contains not more than 10 curies of tritium or 300 millicuries of Promethium-147; and

(ii) Each device has been manufactured, assembled or imported in accordance with a specific license issued by the United States Nuclear Regulatory Commission, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer or assembler of such device pursuant to licensing requirements equivalent to those in Section 32.53 of 10 CFR Part 32 of the regulations of the United States Nuclear Regulatory Commission.

(b) Persons who own, receive, acquire, possess or use luminous safety devices pursuant to the general license in this subsection are exempt from the requirements of chapters 246-221 and 246-222 WAC except that they shall comply with the provisions of WAC 246-221-240 and 246-221-250.

(c) This general license does not authorize the manufacture, assembly, or repair of luminous safety devices containing tritium or Promethium-147.

(d) This general license does not authorize the ownership, receipt, acquisition, possession or use of Promethium-147 contained in instrument dials.

(e) This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-050, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, and 246-232-090.

(6) **Ownership of radioactive material.** A general license is hereby issued to own radioactive material without regard to quantity. Notwithstanding any other provisions of this chapter, this general license does not authorize the manufacture, production, transfer, receipt, possession or use of radioactive material.

(7) Calibration and reference sources.

(a) A general license is hereby issued to those persons listed below to own, receive, acquire, possess, use and transfer, in accordance with the provisions of (d) and (e) of this subsection, Americium-241 in the form of calibration or reference sources:

(i) Any person who holds a specific license issued by the department which authorizes that person to receive, possess, use and transfer radioactive material; or

(ii) Any person who holds a specific license issued by the United States Nuclear Regulatory Commission which authorizes that person to receive, possess, use and transfer special nuclear material.

(b) A general license is hereby issued to own, receive, possess, use and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of (d) and (e) of this subsection to any person who holds a specific license issued by the department which authorizes that person to receive, possess, use and transfer radioactive material.

(c) A general license is hereby issued to own, receive, possess, use and transfer Radium-226 in the form of calibration or reference sources in accordance with the provisions of (d) and (e) of this subsection to any person who holds a specific license issued by the department which authorizes that person to receive, possess, use and transfer radioactive material.

(d) The general licenses in (a), (b) and (c) of this subsection apply only to calibration or reference sources which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the United States Nuclear Regulatory Commission pursuant to Section 32.57 of 10 CFR Part 32 or Section 70.39 of 10 CFR Part 70 or which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer by the department or any agreement state or licensing state pursuant to licensing requirements equivalent to those contained in Section 32.57 of 10 CFR Part 32 or Section 70.39 of 10 CFR

Part 70 of the regulations of the United States Nuclear Regulatory Commission.

(e) The general licenses provided in (a), (b) and (c) of this subsection are subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, 246-232-090, chapters 246-221 and 246-222 WAC.

In addition, persons who own, receive, acquire, possess, use or transfer one or more calibration or reference sources pursuant to these general licenses:

(i) Shall not possess at any one time, at any one location of storage or use, more than 5 microcuries of Americium-241 and 5 microcuries of plutonium and 5 microcuries of Radium-226 in such sources;

(ii) Shall not receive, possess, use or transfer such source unless the source, or the storage container, bears a label which includes one of the following statements or a substantially similar statement which contains the information called for in the following statement:

(A) The receipt, possession, use and transfer of this source, Model , Serial No. , are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS (AMERICIUM-241). (PLUTONIUM)*. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE

.....
Name of manufacturer or importer

*Note: Showing only the name of the appropriate material.

(B) The receipt, possession, use and transfer of this source, Model , Serial No. , are subject to a general license and the regulations of any licensing state. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL - THIS SOURCE CONTAINS RADIUM-226. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

.....
Name of manufacturer or importer

(iii) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the department, the United States Nuclear Regulatory Commission, or an agreement state or licensing state to receive the source;

(iv) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain Americium-241, Plutonium, or Radium-226/Radon-222 which might otherwise escape during storage; and

(v) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(f) These general licenses do not authorize the manufacture of calibration or reference sources containing Americium-241, Plutonium, or Radium-226.

(8) *General license for use of radioactive material for certain in vitro clinical or laboratory testing.**

(a) A general license is hereby issued to any physician, veterinarian, clinical laboratory or hospital to receive, acquire, possess, transfer or use, for any of the following stated tests, in accordance with the provisions of or use, for any of the following stated tests, in accordance with the provisions of (b), (c), (d), (e), and (f) of this subsection the following radioactive materials in prepackaged units:

(i) Iodine-125, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(ii) Iodine-131, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(iii) Carbon-14, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(iv) Hydrogen-3 (tritium), in units not exceeding 50 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(v) Iron-59, in units not exceeding 20 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(vi) Cobalt-57, in units not exceeding 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(vii) Selenium-75, in units not to exceed 10 microcuries each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

(viii) Mock Iodine-125 reference or calibration sources, in units not exceeding 0.05 microcurie of Iodine-129 and 0.005 microcurie of Americium-241 each for use in *in vitro* clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals.

*Note: The new drug provisions of the Federal Food, Drug and Cosmetic Act also govern the availability and use of any specific diagnostic drugs in interstate commerce.

(b) No person shall receive, acquire, possess, use or transfer radioactive material pursuant to the general license established by (a) of this subsection until that person has received a validated copy of department Form RHF-15 "Certificate-in vitro testing with radioactive material under general license." Annual validation requires resubmittal of revised department Form RHF-15 and submittal of the annual fee to the department. The physician, veterinarian, clinical laboratory or hospital shall furnish on department Form RHF-15 the following information and such other information as may be required by that form:

(i) Name and address of the physician, veterinarian, clinical laboratory or hospital;

(ii) The location of use; and

(iii) A statement that the physician, veterinarian, clinical laboratory or hospital has appropriate radiation measuring instruments to carry out *in vitro* clinical or laboratory tests with radioactive material as authorized under the general license in (a) of this subsection and that such tests will be performed only by personnel competent in the use of such instruments and in the handling of the radioactive material.

(c) A person who receives, acquires, possesses or uses radioactive material pursuant to the general license established by (a) of this subsection shall comply with the following:

(i) The general licensee shall not possess at any one time, pursuant to the general license in (a) of this subsection at any one location of storage or use, a total amount of Iodine-125, Iodine-131, Selenium-75, Iron-59, and/or Cobalt-57 in excess of 200 microcuries.

(ii) The general licensee shall store the radioactive material, until used, in the original shipping container or in a container providing equivalent radiation protection.

(iii) The general licensee shall use the radioactive material only for the uses authorized by (a) of this subsection.

(iv) The general licensee shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the department, the United States Nuclear Regulatory Commission, any agreement state or licensing state, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the supplier.

(v) The general licensee shall dispose of the Mock Iodine-125 reference or calibration sources described in (a)(viii) of this subsection as required by WAC 246-221-170.

(d) The general licensee shall not receive, acquire, possess, or use radioactive material pursuant to (a) of this subsection:

(i) Except as prepackaged units which are labeled in accordance with the provision of an applicable specific license issued pursuant to WAC 246-235-097 or in accordance with the provisions of a specific license issued by the United States Nuclear Regulatory Commission, or any agreement state or licensing state which authorizes the manufacture and distribution of Iodine-125, Iodine-131, Carbon-14, Hydrogen-3 (tritium), Iron-59, Selenium-75, Cobalt-57, or Mock Iodine-125 to persons generally licensed under this subsection or its equivalent; and

(ii) Unless one of the following statements, as appropriate, or a substantially similar statement which contains the information called for in one of the following statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

This radioactive material shall be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, posses-

sion, use and transfer are subject to the regulations and a general license of the United States Nuclear Regulatory Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority.

.....
Name of manufacturer

This radioactive material shall be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a licensing state.

.....
Name of manufacturer

(e) The physician, veterinarian, clinical laboratory or hospital possessing or using radioactive material under the general license of (a) of this subsection shall report in writing to the department, any changes in the information previously furnished in the "Certificate - *in vitro* testing with radioactive material under general license," department Form RHF-15. The report shall be furnished within thirty days after the effective date of such change.

(f) This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-090 and 246-220-100. In addition, any person using radioactive material pursuant to the general license of (a) of this subsection is exempt from the requirements of chapters 246-221 and 246-222 WAC with respect to radioactive material covered by that general license, except that such persons using the Mock Iodine-125 described in (a)(viii) of this subsection shall comply with the provisions of WAC 246-221-170, 246-221-240, and 246-221-250 and of these regulations.

(9) **Ice detection devices.**

(a) A general license is hereby issued to own, receive, acquire, possess, use and transfer Strontium-90 contained in ice detection devices, provided each device contains not more than 50 microcuries of Strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the United States Nuclear Regulatory Commission or each device has been manufactured in accordance with the specifications contained in a specific license issued by the department or any agreement state to the manufacturer of such device pursuant to licensing requirements equivalent to those in Section 32.61 of 10 CFR Part 32 of the regulations of the United States Nuclear Regulatory Commission.

(b) Persons who own, receive, acquire, possess, use or transfer Strontium-90 contained in ice detection devices pursuant to the general license in (a) of this subsection:

(i) Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating to the device, discontinue use of the device until it has been inspected, tested for leakage and repaired by a person holding a specific license from the United States Nuclear

Regulatory Commission or an agreement state to manufacture or service such devices; or shall dispose of the device pursuant to the provisions of these regulations;

(ii) Shall assure that all labels affixed to the device at the time of receipt, and which bear a statement which prohibits removal of the labels, are maintained thereon; and

(iii) Are exempt from the requirements of chapters 246-221 and 246-222 WAC except that such persons shall comply with the provisions of WAC 246-221-170, 246-221-240, and 246-221-250.

(c) This general license does not authorize the manufacture, assembly, disassembly or repair of Strontium-90 sources in ice detection devices.

(d) This general license is subject to the provisions of WAC 246-220-020, 246-220-030, 246-220-040, 246-220-060, 246-220-070, 246-220-100, 246-232-050, 246-232-070, 246-232-080, and 246-232-090.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-233-020, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-233-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-233-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-21-050, filed 12/11/86; 83-19-050 (Order 2026), § 402-21-050, filed 9/16/83. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-21-050, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-21-050, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-040.]

Chapter 246-235 WAC

RADIOACTIVE MATERIALS—SPECIFIC LICENSES

WAC

246-235-001	Purpose and scope.
246-235-010	Filing application for specific licenses.
246-235-020	General requirements for the issuance of specific licenses.
246-235-030	Issuance of specific licenses.
246-235-040	Expiration of licenses.
246-235-050	Renewal of license.
246-235-055	Precedence of license condition over regulation.
246-235-060	Amendment of licenses at request of licensee.
246-235-070	Agency action on applications to renew or amend.
246-235-075	Financial assurance and recordkeeping for decommissioning.
246-235-077	Special requirements for emergency planning.
246-235-080	Special requirements for issuance of specific licenses for medical use of radioactive material.
246-235-084	Special requirements for issuance of specific licenses for industrial radiography.
246-235-086	Special requirements for environmentally significant licensing actions.
246-235-090	Special requirements for specific licenses of broad scope.
246-235-091	Manufacture and distribution of industrial products containing depleted uranium under general license.
246-235-093	Manufacture, assembly or distribution of devices under general license.
246-235-095	Manufacture, assembly, or distribution of luminous safety devices, certain calibration sources or ice detectors under general license.
246-235-097	Manufacture and distribution of radioactive material for certain in vitro clinical or laboratory testing under general license.
246-235-100	Manufacture, preparation, or commercial transfer of radiopharmaceuticals for medical use.
246-235-102	Manufacture and distribution of sources or devices containing radioactive material for medical use.
246-235-105	Manufacture, assembly or distribution of radioactive material exempt from regulation.
246-235-110	Special requirements for issuance of specific licenses for source material milling.

246-235-120	Schedule A groups of medical uses of radioactive material (ref. WAC 246-235-080(3) and 246-235-100(9)).
246-235-130	Appendix—General laboratory rules for safe use of unsealed sources.
246-235-140	Schedule B, limits for broad licenses.
246-235-150	Schedule C—Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release.

WAC 246-235-001 Purpose and scope. (1) This chapter prescribes requirements for the issuance of specific licenses.

(2) The provisions and requirements of this chapter are in addition to, and not in substitution for, other requirements of these regulations. In particular the provisions of chapter 246-232 WAC apply to applications and licenses subject to this chapter.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-010, filed 11/30/79, effective 1/1/80. Formerly chapter 402-20 WAC.]

WAC 246-235-010 Filing application for specific licenses. (1) Applications for specific licenses shall be filed on department form RHF-1.

(2) The department may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the department to determine whether the application should be granted or denied or whether a license should be modified or revoked.

(3) Each application shall be signed by the applicant or licensee or a person duly authorized to act for and on the applicant's behalf.

(4) An application for a license may include a request for a license authorizing one or more activities.

(5) In the application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the department provided such references are clear and specific.

(6) Applications and documents submitted to the department may be made available for public inspection except that the department may withhold any document or part thereof from public inspection if disclosure of its content is not required in the public interest and would adversely affect the interest of a person concerned.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-020, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-050.]

WAC 246-235-020 General requirements for the issuance of specific licenses. A license application will be approved if the department determines that:

(1) The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with these regulations in such a manner as to minimize danger to public health and safety or property;

(2) The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;

(3) The issuance of the license will not be inimical to the health and safety of the public; and

(4) The applicant satisfies any applicable special requirements in WAC 246-235-075 through 246-235-110, and chapters 246-239 through 246-252 WAC.

(5) In the case of an application for a license to receive and possess radioactive material for commercial waste disposal by land burial, source material milling, or for the conduct of any other activity which the agency determines will significantly affect the quality of the environment, the department, before commencement of construction of the plant or facility in which the activity will be conducted, has concluded, after independently weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess radioactive material in such plant or facility. As used in this paragraph the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-235-020, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-040, filed 12/11/86. Statutory Authority: Chapter 70.121 RCW, 81-16-031 (Order 1683), § 402-22-040, filed 7/28/81. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-040, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-060.]

WAC 246-235-030 Issuance of specific licenses. (1) Upon a determination that an application meets the requirements of the act and the regulations of the department the department will issue a specific license authorizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary.

(2) The department may incorporate in any license at the time of issuance, or thereafter by appropriate rule, regulation, or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use, storage, and transfer of radioactive material subject to this part as it deems appropriate or necessary in order to:

(a) Minimize danger to public health and safety or property;

(b) Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be appropriate or necessary; and

(c) Prevent loss or theft of material subject to this part.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW

(2003 Ed.)

70.98.080, 87-01-031 (Order 2450), § 402-22-045, filed 12/11/86; 79-12-073 (Order 1459), § 402-22-045, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-080.]

WAC 246-235-040 Expiration of licenses. Except as provided in WAC 246-235-050(2), each specific license shall expire at the end of the day, in the month and year stated therein.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-050, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-100.]

WAC 246-235-050 Renewal of license. (1) Applications for renewal of specific licenses shall be filed in accordance with WAC 246-235-010.

(2) In any case in which a licensee, not less than thirty days prior to expiration of the existing license, has filed an application in proper form for renewal or for a new license authorizing the same activities, such existing license shall not expire until the application has been finally determined by the department.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-050, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-055, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-110.]

WAC 246-235-055 Precedence of license condition over regulation. (1) A license condition may be used to specifically modify any regulation pertaining to the possession, use, storage, transfer, or disposal of radioactive material. Any license condition used to modify an existing regulation shall set forth the title, chapter, section, and, where applicable, any subsection and paragraph numbers for the regulation being modified, and fully define the nature and extent of the modification.

(2) In the event a regulation is changed, an existing license condition that is more restrictive than the new regulation remains in force until there is an amendment or renewal of the license that removes or modifies the license condition.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-235-055, filed 12/9/93, effective 1/9/94.]

WAC 246-235-060 Amendment of licenses at request of licensee. Applications for amendment of a license shall be filed in accordance with WAC 246-235-010 and shall specify the respects in which the licensee desires the license to be amended and the grounds for such amendment.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-22-060, filed 9/16/83; 79-12-073 (Order 1459), § 402-22-060, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-120.]

WAC 246-235-070 Agency action on applications to renew or amend. In considering an application by a licensee

[Title 246 WAC—p. 353]

to renew or amend the license, the department will apply the criteria set forth in this chapter, as applicable.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-065, filed 12/11/86; 79-12-073 (Order 1459), § 402-22-065, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-130.]

WAC 246-235-075 Financial assurance and record-keeping for decommissioning. (1) Each applicant for one of the following licenses shall submit a decommissioning funding plan as described in this section:

(a) A specific license authorizing receipt of radioactive waste for the purpose of volume reduction, repackaging or interim storage.

(b) Receipt of contaminated articles, scrap material, equipment, or clothing to be decontaminated at the licensee's facility.

(c) A specific license authorizing the possession and use of radioactive material of half-life greater than one hundred twenty days and in quantities for unsealed material exceeding 10^3 times and for sealed forms exceeding 10^{10} times the applicable quantities set forth in WAC 246-221-300 Appendix B (for a combination of isotopes the unity rule applies. A decommissioning funding plan will be required if R is greater than 1, where R is defined as the sum of the ratios of the quantity for sealed and unsealed forms of each isotope compared to the applicable value derived from WAC 246-221-300).

(d) A specific license authorizing possession and use of source material in readily dispersible form and in quantities greater than 10 millicuries.

(2) Each decommissioning funding plan shall contain:

(a) A cost estimate for decommissioning facilities impacted by the activities authorized in the specific license.

(b) A description of the method of assuring funds for decommissioning.

(c) A schedule for adjusting cost estimates and associated funding levels periodically over the life of the facility or facilities.

(d) A description of methods and general procedures for performing facility decontamination, maintaining security, and performing a final radiation survey.

(e) A commitment to clean up accidental spills promptly and to begin decommissioning of the facility or facilities within twelve months of ceasing operation involving radioactive material.

(3) Each cost estimate for decommissioning shall include:

(a) A description of the facility and areas within the facility likely to require decommissioning as a result of routine operation.

(b) Anticipated labor, equipment and material costs.

(c) Anticipated waste volume.

(d) Anticipated packaging, transportation and waste disposal costs.

(e) An assessment of costs associated with an accident involving licensed material.

(4) Each applicant shall submit a certification that financial assurance for decommissioning shall be provided by one or more of the following methods:

(a) Prepayment. Prepayment is the deposit of sufficient funds to pay decommissioning costs. Funds shall be deposited prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(b) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid should the licensee default. A surety method may be in the form of a surety bond, letter of credit, or line of credit. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance shall be open-ended or, if written for a specified term, such as five years, shall be renewed automatically unless ninety days or more prior to the renewal date, the issuer notifies the department, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance shall also require that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the department within thirty days after receipt of notification of cancellation.

(ii) The surety method or insurance shall be payable to a trust established for decommissioning costs. The trustee and trust shall be acceptable to the department. Acceptable trustees include an appropriate state or federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

(iii) The surety method or insurance must remain in effect until the department has terminated the license.

(c) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control. The total amount of funds in the external sinking fund shall be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provisions shall be as stated in subsection (4)(b) of this section.

(d) Statement of intent. In the case of state or local government licensees, a statement of intent containing a cost estimate for decommissioning and indicating that funds for decommissioning will be obtained when necessary.

(e) Other methods of financial assurance as approved by the department. The department may approve other financial mechanisms submitted by the applicant or licensee if the alternate method meets, at a minimum, the requirements of 10 C.F.R. 30.35 and associated U.S. Nuclear Regulatory Commission guidance.

(5)(a) The department shall review each decommissioning funding plan prior to license issuance and prior to license renewal.

(b) The applicant or licensee shall incorporate department comments into its cost estimate and shall revise its financial surety accordingly.

(c) Applicants shall obtain the appropriate financial assurance as approved by the department prior to receipt of licensed material. The department may issue a new license if the applicant agrees to comply with the decommissioning funding plan as approved. If the applicant defers execution of the financial instrument until after the license has been issued, a signed original of the financial instrument obtained to satisfy the requirements of this section shall be submitted to the department before receipt of licensed material.

(d) Holders of licenses issued on or before the effective date of this rule shall submit a decommissioning funding plan to the department by April 1, 1993. Licensees shall implement the financial assurance requirements within thirty days of receiving department approval of the decommissioning funding plan. Licensees shall submit copies of the financial surety within thirty days of securing the surety and annually thereafter.

(6) Each person licensed under this chapter shall keep records of information important to the safe and effective decommissioning of the facility in an identified location until the site is released for unrestricted use. Before licensed activities are transferred or assigned in accordance with WAC 246-232-050(2), licensees shall transfer all records described in this subsection to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated by the department. If records of relevant information are kept for other purposes, reference to these records and their locations may be used. Information the department considers important to decommissioning consists of:

(a) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records shall include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(b) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(c) Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after any leak) or depleted uranium used only for shielding or as penetrators in unused munitions, or radioactive materials having only half-lives of less than sixty-five

days, a list contained in a single document and updated every two years, of the following:

(i) All areas designated and formerly designated as restricted areas as defined under WAC 246-220-010;

(ii) All areas outside of restricted areas that require documentation under (a) of this subsection;

(iii) All areas outside of restricted areas where current and previous wastes have been buried as documented under WAC 246-221-230 (8)(a); and

(iv) All areas outside of restricted areas which contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in chapter 246-246 WAC or apply for approval for disposal under WAC 246-221-180. Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-235-075, filed 3/15/00, effective 4/15/00; 99-15-105, § 246-235-075, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080, 97-08-095, § 246-235-075, filed 4/2/97, effective 5/3/97; 92-06-008 (Order 245), § 246-235-075, filed 2/21/92, effective 3/23/92.]

WAC 246-235-077 Special requirements for emergency planning. (1) Each application to possess radioactive materials in unsealed form, on foils or plated sources, or sealed in glass in excess of the quantities in WAC 246-235-150, "Schedule C—Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release," must contain either:

(a) An evaluation showing that the maximum dose to a member of the public offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid or an intake of 2 milligrams of soluble uranium; or

(b) An emergency plan for responding to the radiological hazards of an accidental release of radioactive material and to the chemical hazards associated with uranium hexafluoride, when present.

(2) One or more of the following factors may be used to support an evaluation submitted under subsection (1)(a) of this section:

(a) The radioactive material is physically separated so that only a portion could be involved in an accident;

(b) All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;

(c) The release fraction in the respirable size range would be lower than the release fraction listed in WAC 246-235-150 Schedule C due to the chemical or physical form of the material;

(d) The solubility of the radioactive material would reduce the dose received;

(e) Facility design or engineered safety features in the facility would cause the release fraction to be lower than listed in WAC 246-235-150 Schedule C;

(f) Operating restrictions or procedures would prevent a release fraction as large as that listed in WAC 246-235-150 Schedule C; or

(g) Other factors appropriate for the specific facility.

(3) An emergency plan for responding to a release of radioactive material submitted under subsection (1)(b) of this section must include the following information:

(a) Facility description. A brief description of the licensee's facility and area near the site.

(b) Types of accidents. An identification of each type of radioactive materials accident for which protective actions may be needed.

(c) Classification of accidents. A system for classifying accidents as alerts or site area emergencies.

(d) Detection of accidents. Identification of the means of detecting each type of accident in a timely manner.

(e) Mitigation of consequences. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(f) Assessment of releases. A brief description of the methods and equipment to assess releases of radioactive materials.

(g) Responsibilities. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the department; also responsibilities for developing, maintaining, and updating the plan.

(h) Notification and coordination. A commitment, and a brief description of the means available, promptly to notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the department immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency. These reporting requirements do not supersede or release licensees from complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499 or other state or federal reporting requirements.

(i) Information to be communicated. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to offsite response organizations and to the department.

(j) Training. A brief description of the frequency, performance objectives and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

(k) Safe shutdown. A brief description of the means of restoring the facility to a safe condition after an accident.

(l) Exercises. Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises although recommended is not required. Exercises must use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(m) Hazardous chemicals. A certification that the licensee or applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, if applicable to the licensee's or applicant's activities at the proposed place of use of the radioactive material.

(4) The licensee shall allow the offsite response organizations expected to respond in case of an accident sixty days to comment on the licensee's emergency plan before submitting it to the department. The licensee shall provide any comments received within the sixty days to the department with the emergency plan.

[Statutory Authority: RCW 70.98.050, 95-01-108, § 246-235-077, filed 12/21/94, effective 1/21/95.]

WAC 246-235-080 Special requirements for issuance of specific licenses for medical use of radioactive material.

(1) *Human use of radioactive material in institutions.* In addition to the requirements set forth in WAC 246-235-020 a specific license for human use of radioactive material in institutions will be issued if:

(a) The applicant has appointed a radiation safety committee to coordinate the use of radioactive material throughout that institution and to maintain surveillance over the institution's radiation safety program. Membership of the committee should include a specialist (where applicable a physician) from each department where radioactive material is used, a representative of the institution's management, a representative of the nursing staff, and a person trained in radiation safety. The radiation safety committee shall meet at least quarterly. Minutes shall be taken and maintained for two years for inspection by the department;

(b) The applicant possesses adequate facilities for the clinical care of patients. The applicant is advised that construction of new radioisotope facilities and modification of existing facilities must also comply with the requirements of WAC 246-318-660 of the construction review section of the department;

(c) The physician(s) designated on the application as the individual user(s) has (or have) substantial experience in the

handling and administration of radioactive material and, where applicable, the clinical management of radioactive patients; and

(d) If the application is for a license to use unspecified quantities or multiple types of radioactive material, the applicant's staff has substantial experience in the use of a variety of radioactive materials for a variety of human uses.

(2) *Licensing of individual physicians for human use of radioactive material.* In addition to the requirements set forth in WAC 246-235-020 a specific license for the human use of radioactive material will be issued to an individual physician if:

(a) The applicant has access to a hospital possessing adequate facilities to hospitalize and monitor the applicant's radioactive patients whenever it is advisable;

(b) The applicant has extensive experience in the handling and administration of radioactive material and, where applicable, the clinical management of radioactive patients;

(c) The application is for use in the applicant's practice in an office outside a medical institution; and

(d) If the application is for use by an individual physician or group of physicians for a specific license to receive, possess or use radioactive material on the premises of a medical institution, the department will issue a specific license only if:

(i) The use of radioactive material is limited to the:

(A) Administration of radiopharmaceuticals for diagnostic or therapeutic purposes;

(B) Performance of diagnostic studies on patients to whom a radiopharmaceutical has been administered;

(C) Performance of in vitro diagnostic studies; or

(D) Calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation and diagnostic instrumentation;

(ii) The physician brings the radioactive material with him or her and removes the radioactive material when he or she departs. (The institution cannot receive, possess or store radioactive material other than the amount of material remaining in the patient); and

(iii) The medical institution does not hold a radioactive material license issued pursuant to the provisions of subsection (1) of this section.

(3) *Specific licenses for certain groups of medical uses of radioactive material.*

(a) Subject to the provisions of (b), (c) and (d) of this subsection an application for a specific license pursuant to subsection (1), (2) or (4) of this section, or for any medical use or uses of radioactive material specified in one or more of Groups I to VI, inclusive, of WAC 246-235-120, Schedule A, will be approved for all of the uses within the group or groups which include the use or uses specified in the application if:

(i) The applicant satisfies the requirements of subsection (1), (2) or (4) of this section;

(ii) The applicant, or the physician designated in the application as the individual user, has adequate clinical experience in the types of uses included in the group or groups;

(iii) The applicant, or the physicians and all other personnel who will be involved in the preparation and use of the radioactive material, have adequate training and experience

in the handling of radioactive material appropriate to their participation in the uses included in the group or groups;

(iv) The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the uses included in the group or groups, specifically:

(A) For Groups I through V, applicant must possess and use a calibrated and operable low-range survey instrument with a thin window (less than 7 mg/cm²) capable of detecting radiation levels of 0.05 milliroentgen per hour up to at least 20 milliroentgens per hour;

(B) For Groups III, V, and VI, applicant must possess a calibrated and operable high-range survey instrument capable of detecting radiation levels up to at least one Roentgen per hour;

(v) The applicant's radiation safety operating procedures are adequate for handling and disposal of the radioactive material involved in the uses included in the group or groups.

(b) Any licensee or registrant who is authorized to use radioactive material pursuant to one or more groups in (a) of this subsection and WAC 246-235-120, Schedule A, is subject to the following conditions:

(i) For Groups I, II, IV, and V, no licensee or registrant shall receive, possess or use radioactive material except as a radiopharmaceutical manufactured in the form to be administered to the patient, labeled, packaged and distributed in accordance with a specific license issued by the department pursuant to WAC 246-235-100, a specific license issued by the United States Nuclear Regulatory Commission pursuant to Section 32.72 of 10 CFR Part 32, or a specific license issued by an agreement state or a licensing state pursuant to equivalent regulations.

(ii) For Group III, no licensee or registrant shall receive, possess or use generators or reagent kits containing radioactive material unless manufactured, labeled, packaged and distributed in accordance with a specific license issued by the department pursuant to WAC 246-235-100, a specific license issued by the United States Nuclear Regulatory Commission under Section 32.73 of 10 CFR Part 32, or a specific license issued by an agreement state or a licensing state under equivalent regulations.

(iii) For Group VI, no licensee or registrant shall receive, possess or use radioactive material except as contained in a source or device that has been manufactured, labeled, packaged and distributed in accordance with a specific license issued by the department under WAC 246-235-102, a specific license issued by the United States Nuclear Regulatory Commission under Section 32.74 of 10 CFR Part 32, or a specific license issued to the manufacturer by an agreement state or a licensing state under equivalent regulations.

(iv) For Group III, any licensee or registrant who uses generators or reagent kits shall elute the generator or process radioactive material with the reagent kit in accordance with instructions approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and are furnished by the manufacturer on the label attached to or in the leaflet or brochure which accompanies the generator or reagent kit.

(c) Any licensee who is licensed under (a) of this subsection for one or more of the medical use groups in WAC 246-

235-120, Schedule A, also is authorized, subject to the provisions of (c) and (d) of this subsection to receive, possess and use for calibration and reference standards:

(i) Any radioactive material authorized for use under Group I, Group II, or Group III of WAC 246-235-120, Schedule A, with a half-life not longer than one hundred days, in amounts not to exceed 15 millicuries total;

(ii) Any radioactive material authorized for use under Group I, Group II, or Group III of WAC 246-235-120, Schedule A, with half-life greater than one hundred days in amounts not to exceed 200 microcuries total;

(iii) Technetium-99m in amounts not to exceed 50 millicuries;

(iv) Any radioactive material excluding Radium-226, in amounts not to exceed fifteen millicuries per sealed source, contained in calibration or reference sources that have been manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the department pursuant to WAC 246-235-102, a specific license issued by the United States Nuclear Regulatory Commission pursuant to Section 32.74 of 10 CFR Part 32, or a specific license issued to the manufacturer by an agreement state or a licensing state pursuant to equivalent regulations.

(d) Leak tests.

(i) Any licensee or registrant who possesses sealed sources as calibration or reference sources under (c) of this subsection shall cause each sealed source containing radioactive material, other than Hydrogen-3, with a half-life greater than thirty days in any form other than gas to be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed sources shall not be used until tested. However, leak tests are not required when:

(A) The source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material;

(B) The sealed source is stored and is not being used: Provided, a physical inventory of the source and wipe surveys of the storage area or storage container are conducted.

(ii) The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is mounted or stored on which contamination might be expected to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the department.

(iii) If the leak test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee or registrant shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with chapters 246-235 and 246-221 WAC. A report shall be filed within five days of the test with the department describing the equipment involved, the test results, and the corrective action taken.

(e) Any licensee or registrant who possesses and uses calibration and reference sources under (c)(iv) of this subsection shall:

(i) Follow the radiation safety and handling instructions approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and furnished by the manufacturer on the label attached to the source, or permanent container thereof, or in the leaflet or brochure that accompanies the source, and maintain the instructions in a legible and conveniently available form; and

(ii) Conduct a quarterly physical inventory to account for all sources received and possessed. Records of the inventories shall be maintained for inspection by the department and shall include at a minimum the quantities and kinds of radioactive material, location of sources, name of person performing the inventory, and the date of the inventory.

(4) *Human use of sealed sources.* In addition to the requirements set forth in WAC 246-235-020, a specific license for human use of sealed sources will be issued only if the individual applicant or, if the application is made by an institution, the individual user:

(a) Has specialized training in the diagnostic or therapeutic use of the sealed source considered, or has experience equivalent to such training; and

(b) Is a physician.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-235-080, filed 3/24/00, effective 4/24/00; 98-13-037, § 246-235-080, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-22-070, filed 12/11/86; 83-19-050 (Order 2026), § 402-22-070, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-22-070, filed 12/8/80. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-070, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-070.]

WAC 246-235-084 Special requirements for issuance of specific licenses for industrial radiography. In addition to the requirements set forth in WAC 246-235-020, a specific license for use of sealed sources in industrial radiography will be issued if:

(1) The applicant submits an adequate program for training radiographers and radiographer's assistants that meets the requirements of WAC 246-243-050 and 246-243-130.

(a) After June 30, 2000, a license applicant need not describe its initial training and examination program for radiographers in the subjects outlined in WAC 246-243-230.

(b) From June 30, 2000, to January 1, 2001, a license applicant may affirm that all individuals acting as industrial radiographers will be certified in radiation safety by a certifying entity before beginning duty as radiographers. This affirmation substitutes for a description of its initial training and examination program for radiographers in the subjects outlined in WAC 246-243-230.

(2) The applicant submits procedures for verifying and documenting the certification status of radiographers and for ensuring that the certification of individuals acting as radiographers remains valid.

(3) The applicant submits written operating and emergency procedures as described in WAC 246-243-140.

(4) The applicant submits a description of a program for inspections of the job performance of each radiographer and radiographers' assistant at intervals not to exceed six months as described in WAC 246-243-050.

(5) The applicant submits a description of the applicant's overall organizational structure as it applies to the radiation safety responsibilities in industrial radiography, including specified delegation of authority and responsibility.

(6) The applicant identifies and lists the qualifications of the individual(s) designated as the RSO (WAC 246-243-047) and potential designees responsible for ensuring that the licensee's radiation safety program is implemented in accordance with approved procedures.

(7) If an applicant intends to perform leak testing of sealed sources or of exposure devices containing depleted uranium (DU) shielding, the applicant shall describe the procedures for performing and the qualifications of the person(s) authorized to do the leak testing. If the applicant intends to analyze its own wipe samples, the application must include a description of the procedures to be followed. The description must include the:

- (a) Instruments to be used;
- (b) Methods of performing the analysis; and
- (c) Pertinent experience of the person who will analyze the wipe samples.

(8) If the applicant intends to perform "in-house" calibrations of survey instruments, the applicant must describe methods to be used and the relevant experience of the person(s) who will perform the calibrations. All calibrations must be performed according to these procedures and the intervals prescribed in WAC 246-243-080.

(9) The applicant identifies and describes the location(s) of all field stations and permanent radiographic installations.

(10) The applicant identifies the location where all records required by this section and other sections of these regulations will be maintained.

[Statutory Authority: RCW 70.98.050, 00-08-013, § 246-235-084, filed 3/24/00, effective 4/24/00.]

WAC 246-235-086 Special requirements for environmentally significant licensing actions. In addition to the requirements set forth in WAC 246-235-020, a specific license for any activity within the licensing authority of the department which the department determines will significantly affect the radiological quality of the human environment, including those specified in WAC 197-11-845(1) and 246-03-030 (1)(a)(ii) (i.e., licenses to operate low level waste burial facilities or licenses to operate or expand beyond the design capacity, mineral processing facilities or their tailings areas, whose products, or byproducts, have concentrations of naturally occurring radioactive material in excess of exempt concentrations as specified in WAC 246-232-130, Schedule C), will be issued if the following conditions are met:

(1) Environmental impact statement.

(a) The application for a license or license amendment (other than administrative amendments) is accompanied or preceded by a final environmental impact statement or final declaration of nonsignificance completed in accordance with the State Environmental Policy Act (SEPA) procedures and guidelines specified in chapters 197-11 and 246-03 WAC. For any uranium or thorium mill in operation on or before the effective date of this regulation for which an environmental impact statement has not been prepared previously, an application for license renewal must be accompanied or preceded

(2003 Ed.)

by a final environmental impact statement or final declaration of nonsignificance completed in accordance with SEPA guidelines.

Note: No construction shall be commenced until the license has been issued or unless an emergency exemption from SEPA requirements is granted in accordance with WAC 197-11-880. For the purposes of this subsection, the term "commencement of construction" means any clearing of land, excavation or other substantial action related to a proposed activity for specific licensing that would adversely affect the natural environment of a site; this term does not include changes desirable for the temporary use of the land for public recreational use, limited borings to determine site characteristics as necessary for environmental assessment, or other preconstruction monitoring to establish background information related to suitability of a site or to the protection of environmental values. In the case where an exemption is granted, the applicant shall assume all financial risk for construction activity; waive any claim of entitlement to the issuance of a license based solely upon the grant of the exemption or the commencement of construction pursuant thereto; and furnish, if the circumstances warrant and the department so requires, a financial surety arrangement to insure the protection of the public health, safety and the environment in the event of abandonment, default, or inability of the license applicant to meet the requirements of the act or these regulations.

(b) In addition to the information required in chapter 197-11 WAC, the following additional areas shall be addressed in the final environmental impact statement:

(i) Alternative sites to those chosen by the applicant shall include all alternative sites, whether or not those sites are under the control or ownership of the applicant.

(ii) Long term impacts shall include, but not be limited to, decommissioning, decontamination, reclamation impacts and material management associated with the proposed activities.

(iii) Environmental reviews, dose assessments, ecology, construction effects on biota, impact on the environment from the use of chemicals, and socioeconomic effects shall be addressed.

(iv) Alternative disposal sites and techniques for disposal shall be evaluated to determine if a site or technique is clearly superior.

(2) For uranium or thorium milling operations, a bond made payable to the department of health or other acceptable government agency, and in an amount specified by the department, shall be posted to ensure the protection of the public health and safety in the event of abandonment, default or other inability of the licensee to meet the requirements for reclamation and disposal of tailings and for decommissioning the site. The bond, or a copy thereof when the bond is made payable to another government agency, shall be received by the department prior to issuance of the license, or prior to license renewal for mills in operation on or before the effective date of this regulation. Other acceptable surety arrangements in addition to surety bonding include cash deposits, certificates of deposit, deposits of government securities, letters or lines of credit or combinations of the foregoing. The amount and mechanism of the surety arrangement may be reviewed by the department preceding each license renewal and adjustments may be required of the licensee prior to such renewal.

(3) The owner of the proposed uranium or thorium mill and tailings site(s) agrees to transfer or revert to the appropriate state or federal agency upon termination of the license, all lands, buildings and grounds, and any interest therein, neces-

[Title 246 WAC—p. 359]

sary to fulfill the purposes of this subsection, except where the lands are held in trust for, or are owned by, any Indian tribe. For any uranium or thorium mill in operation on or before the effective date of this regulation, such an agreement will be required prior to license renewal.

(4) For all uranium and thorium milling operations, the owner or operator shall arrange to pay to the department or its designee a fee in accordance with WAC 246-254-150 for a special security fund for the further maintenance, surveillance or care which may be required after a licensee has ceased to operate.

A minimum fund of two hundred fifty thousand dollars shall be provided by the licensee payable to the state. If a shortfall exists between the amount of money in the special security fund and the two hundred fifty thousand dollars minimum amount, a surety bond, or other acceptable surety instrument as defined above shall be arranged.

(5) The application for a license includes a description of an appropriate program for effluent monitoring, environmental monitoring and data reporting. The description shall encompass locations, frequency, and types of sampling, analytical plans and procedures, minimum detection levels, sampling equipment and quality assurance programs.

(6) All licensees or registrants required to meet the additional requirements set forth in this subsection shall establish environmental monitoring programs adequate to determine the impact of their activity on the natural environment around the site of their environmentally significant activity. The established environmental and effluent monitoring program shall address all environmentally significant radionuclide releases and external radiation sources caused or threatened to be caused by the licensee's activities.

(a) Effluent and environmental monitoring results shall include the following minimum information as pertinent:

(i) Information as to flow rates, total volume of effluent, peak concentration, concentration of each radionuclide in the effluent averaged over a period of one year at the point where the effluent leaves a stack, tube, pipe, or similar conduit;

(ii) A description of the properties of the effluents, including:

(A) Chemical composition;

(B) Physical characteristics, including suspended solids content in liquid effluents, and nature of gas aerosol for air effluents;

(C) The hydrogen ion concentrations (pH) of liquid effluents; and

(D) The size range of particulates in effluent released into air;

(iii) A description of the anticipated human occupancy in the unrestricted area where the highest concentration of radioactive material from the effluent is expected, and, in the case of a river or stream, a description of water uses downstream from the point of release of the effluent.

(iv) Information as to the highest concentration of each radionuclide in an unrestricted area, including anticipated concentrations averaged over a period of one year:

(A) In air at any point of human occupancy; or

(B) In water at points of use downstream from the point of release of the effluent;

(v) The background concentration of radionuclides in the receiving river or stream prior to the release of liquid effluent;

(vi) A description of the waste treatment facilities and procedures used to reduce the concentration of radionuclides in effluents prior to their release;

(vii) A written description of sampling techniques and sample analysis methods;

(viii) A written description of how all calculated results were obtained from sample analysis data. This explanation shall include example calculations and estimates of the precision and sensitivity of monitoring results;

(ix) A written description of the licensee's quality control program including specification of control samples and standard samples used.

(b) The licensee shall submit in writing to the department within sixty days after January 1 and July 1 of each year, reports specifying the quantities of each of the principle radionuclides released to unrestricted areas in liquid and in gaseous effluent during the previous six months of operations. This data shall be reported in a manner that will permit the department to confirm the potential annual radiation doses to the public. All data from the radiological and nonradiological environmental monitoring program will also be submitted for the same time period and frequency as specified above. The data shall be reported in a manner which will allow the department to confirm the potential annual radiation doses to the public.

(7) For land disposal of radioactive material, the provisions of chapter 246-250 WAC must also be met.

(8) For operation of mineral processing facilities, the provisions of chapter 246-252 WAC must also be met.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-235-086, filed 3/24/00, effective 4/24/00.]

WAC 246-235-090 Special requirements for specific licenses of broad scope. This section prescribes requirements for the issuance of specific licenses of broad scope for radioactive material ("broad licenses") and certain regulations governing holders of such licenses.*

*Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity or other product containing source material or byproduct material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(1) *The different types of broad licenses are set forth below:*

(a) A "Type A specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of the radioactive material specified in the license, but not exceeding quantities specified in the license, for any authorized purpose. The quantities specified are usually in the millicurie range.

(b) A "Type B specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in WAC 246-235-140 Schedule B, for any authorized purpose. The possession limit for a

Type B broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in WAC 246-235-140 Schedule B, Column I. If two or more radionuclides are possessed thereunder, the possession limit for each is determined as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in WAC 246-235-140 Schedule B, Column I, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(c) A "Type C specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use and transfer of any chemical or physical form of radioactive material specified in WAC 246-235-140 Schedule B, for any authorized purpose. The possession limit for a Type C broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in WAC 246-235-140 Schedule B, Column II. If two or more radionuclides are possessed thereunder, the possession limit is determined for each as follows: For each radionuclide determine the ratio of the quantity possessed to the applicable quantity specified in WAC 246-235-140 Schedule B, Column II, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(2) *An application for a Type A specific license of broad scope will be approved if:*

(a) The applicant satisfies the general requirements specified in WAC 246-235-020.

(b) The applicant has engaged in a reasonable number of activities involving the use of radioactive material; and

(c) The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(i) The establishment of a radiation safety committee composed of such persons as a radiation safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive material;

(ii) The appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and

(iii) The establishment of appropriate administrative procedures to assure:

(A) Control of procurement and use of radioactive material;

(B) Completion of safety evaluation of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(C) Review, approval, and recording by the radiation safety committee of safety evaluation of proposed uses prepared in accordance with item (2)(c)(iii)(B) of this section prior to use of the radioactive material.

(3) *An application for a Type B specific license of broad scope will be approved if:*

(a) The applicant satisfies the general requirements specified in WAC 246-235-020; and

(b) The applicant has established administrative controls and provisions relating to organization and management, procedures, recordkeeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(i) The appointment of a radiation safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and

(ii) The establishment of appropriate administrative procedures to assure:

(A) Control of procurement and use of radioactive material;

(B) Completion of safety evaluations of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(C) Review, approval, and recording by the radiation safety officer of safety evaluations of proposed uses prepared in accordance with item (3)(b)(ii)(B) of this section prior to use of the radioactive material.

(4) *An application for a Type C specific license of broad scope will be approved if:*

(a) The applicant satisfies the general requirements specified in WAC 246-235-020.

(b) The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of individuals, who have received:

(i) A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering; and

(ii) At least forty hours of training and experience in the safe handling of radioactive material, and in the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and

(c) The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, recordkeeping, material control and accounting, and management review necessary to assure safe operations.

(5) *Specific licenses of broad scope are subject to the following conditions:*

(a) Unless specifically authorized by the department, persons licensed under this section shall not:

(i) Conduct tracer studies in the environment involving direct release of radioactive material;

(ii) Receive, acquire, own, possess, use or transfer devices containing 100,000 curies or more of radioactive material in sealed sources used for irradiation of materials;

(iii) Conduct activities for which a specific license issued by the department under WAC 246-235-080 through 246-235-086 or WAC 246-235-091 through 246-235-105 is required; or

(iv) Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug or other product designed for ingestion or inhalation by, or application to, a human being.

(b) Each Type A specific license of broad scope issued under this part shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety committee.

(c) Each Type B specific license of broad scope issued under this part shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety officer.

(d) Each Type C specific license of broad scope issued under this part shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals who satisfy the requirements of subsection (4) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-235-090, filed 3/24/00, effective 4/24/00; 98-13-037, § 246-235-090, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-090, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-073.]

WAC 246-235-091 Manufacture and distribution of industrial products containing depleted uranium under general license.

(1) An application for a specific license to manufacture industrial products and devices containing depleted uranium for use pursuant to WAC 246-233-010(4) or equivalent regulations of the United States Nuclear Regulatory Commission or an agreement state will be approved if:

(a) The applicant satisfies the general requirements specified in WAC 246-235-020;

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses and potential hazards of the industrial product or device to provide reasonable assurance that possession, use or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in one year a radiation dose in excess of ten percent of the limits specified in WAC 246-221-010(1); and

(c) The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass-volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.

(2) In the case of an industrial product or device whose unique benefits are questionable, the department will approve an application for a specific license under this section only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

(3) The department may deny any application for a specific license under this section if the end use(s) of the industrial product or device cannot be reasonably foreseen.

(4) Each person licensed pursuant to subsection (1) of this section shall:

(a) Maintain the level of quality control required by the license in the manufacture of the industrial product or device, and in the installation of the depleted uranium into the product or device;

(b) Label or mark each unit to:

(i) Identify the manufacturer of the product or device and the number of the license under which the product or device was manufactured, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and

(ii) State that the receipt, possession, use and transfer of the product or device are subject to a general license or the equivalent and the regulations of the United States Nuclear Regulatory Commission or of an agreement state;

(c) Assure that the depleted uranium before being installed in each product or device has been impressed with the following legend clearly legible through any plating or other covering: "Depleted uranium";

(d) Furnish to each person to whom depleted uranium in a product or device is transferred for use pursuant to the general license contained in WAC 246-233-010(4) or its equivalent:

(i) A copy of the general license contained in WAC 246-233-010(4) and a copy of department Form RHF-20; or

(ii) A copy of the general license contained in the United States Nuclear Regulatory Commission's or agreement state's regulation equivalent to WAC 246-233-010(4) and a copy of the United States Nuclear Regulatory Commission's or agreement state's certificate, or alternatively, furnish a copy of the general license contained in WAC 246-233-010(4) and a copy of department Form RHF-20 with a note explaining that use of the product or device is regulated by the United States Nuclear Regulatory Commission or an agreement state under requirements substantially the same as those in WAC 246-233-010(4).

(e) Report to the department all transfers of industrial products or devices to persons for use under the general license in WAC 246-233-010(4). Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within thirty days after the end of each calendar quarter in which such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under chapter 246-233 WAC during the reporting period, the report shall so indicate;

(f) Provide certain other reports as follows:

(i) Report to the United States Nuclear Regulatory Commission all transfers of industrial products or devices to persons for use under the United States Nuclear Regulatory Commission general license in Section 40.25 of 10 CFR Part 40;

(ii) Report to the responsible department all transfers of devices manufactured and distributed pursuant to this section for use under a general license in that state's regulations equivalent to WAC 246-233-010(4);

(iii) Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within thirty days after the end of each calendar quarter in which such product or device is transferred to the generally licensed person;

(iv) If no transfers have been made to United States Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the United States Nuclear Regulatory Commission;

(v) If no transfers have been made to general licensees within a particular agreement state during the reporting period, this information shall be reported to the responsible department; and

(g) Keep records showing the name, address and point of contact for each general licensee to whom the person transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in WAC 246-233-010(4) or equivalent regulations of the United States Nuclear Regulatory Commission or of an agreement state. The records shall be maintained for a period of two years and shall show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the report requirements of this section.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-235-091, filed 6/8/98, effective 7/9/98.]

WAC 246-235-093 Manufacture, assembly or distribution of devices under general license. (1) An application for a specific license to manufacture or distribute devices containing radioactive material, excluding special nuclear material, to persons generally licensed under WAC 246-233-020(4) or equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state will be approved if:

(a) The applicant satisfies the general requirements of WAC 246-235-020;

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:

(i) The device can be safely operated by persons not having training in radiological protection;

(ii) Under ordinary conditions of handling, storage and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in one year a dose in excess of ten percent of the limits specified in the table in WAC 246-221-010(1); and

(iii) Under accident conditions (such as fire and explosion) associated with handling, storage and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:

Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye	15 rems
Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter	200 rems
Other organs	50 rems

(c) Each device bears a durable, legible, clearly visible label or labels approved by the department, which contain in a clearly identified and separate statement:

(i) Instructions and precautions necessary to assure safe installation, operation and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);

(ii) The requirement, or lack of requirement, for leak testing, or for testing any on-off mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and

(iii) The information called for in one of the following statements, as appropriate, in the same or substantially similar form:

(A) The receipt, possession, use and transfer of this device, Model , Serial No. Note*, are subject to a general license or the equivalent, and the regulations of the United States Nuclear Regulatory Commission or a state with which the United States Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

.....
(Name of manufacturer or distributor)*

(B) The receipt, possession, use and transfer of this device, Model , Serial No. Note*, are subject to a general license or the equivalent, and the regulations of a licensing state. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

.....
(Name of manufacturer or distributor)*

*Note: The model, serial number, and name of the manufacturer or distributor may be omitted from this label provided the information is elsewhere specified in labeling affixed to the device.

(2) In the event the applicant desires that the device be required to be tested at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, the applicant shall include in the application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the device or similar devices and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on-off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the department

will consider information which includes, but is not limited to:

- (a) Primary containment (source capsule);
- (b) Protection of primary containment;
- (c) Method of sealing containment;
- (d) Containment construction materials;
- (e) Form of contained radioactive material;
- (f) Maximum temperature withstood during prototype

tests;

- (g) Maximum pressure withstood during prototype tests;
- (h) Maximum quantity of contained radioactive material;
- (i) Radiotoxicity of contained radioactive material; and
- (j) Operating experience with identical devices or similarly designed and constructed devices.

(3) In the event the applicant desires that the general licensee under WAC 246-233-020(4), or under equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the applicant shall include in the application written instructions to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities, and bases for such estimates. The submitted information shall demonstrate that performance of such activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive in one year a radiation dose in excess of ten percent of the limits specified in the table in WAC 246-221-010(1).

(4) Each person licensed under subsection (1) of this section to distribute devices to generally licensed persons shall:

(a) Furnish a copy of the general license contained in WAC 246-233-020(4) to each person to whom the person directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license contained in WAC 246-233-020(4);

(b) Furnish a copy of the general license contained in the United States Nuclear Regulatory Commission's, agreement state's, or licensing state's regulation equivalent to WAC 246-233-020(4), or alternatively, furnish a copy of the general license contained in WAC 246-233-020(4) to each person to whom, directly or through an intermediate person, is transferred radioactive material in a device for use pursuant to the general license of the United States Nuclear Regulatory Commission, the agreement state or the licensing state. If a copy of the general license in WAC 246-233-020(4) is furnished to such a person, it shall be accompanied by a note explaining that the use of the device is regulated by the United States Nuclear Regulatory Commission, agreement state or licensing state under requirements substantially the same as those in WAC 246-233-020(4);

(c) Report to the department all transfers of such devices to persons for use under the general license in WAC 246-233-020(4). Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model number of

device transferred, and the quantity and type of radioactive material contained in the device. If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include identification of each intermediate person by name, address, contact, and relationship to the intended user. If no transfers have been made to persons generally licensed under WAC 246-233-020(4) during the reporting period, the report shall so indicate. The report shall cover each calendar quarter and shall be filed within thirty days thereafter.

(d) Reports to other departments.

(i) Report to the United States Nuclear Regulatory Commission all transfers of such devices to persons for use under the United States Nuclear Regulatory Commission general license in Section 31.5 of 10 CFR Part 31.

(ii) Report to the responsible department all transfers of devices manufactured and distributed pursuant to this section for use under a general license in that state's regulations equivalent to WAC 246-233-020(4).

(iii) Such reports shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the department and the general licensee, the type and model of the device transferred, and the quantity and type of radioactive material contained in the device. If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include identification of each intermediate person by name, address, contact, and relationship to the intended user. The report shall be submitted within thirty days after the end of each calendar quarter in which such a device is transferred to the generally licensed person.

(iv) If no transfers have been made to United States Nuclear Regulatory Commission licensees during the reporting period, this information shall be reported to the United States Nuclear Regulatory Commission.

(v) If no transfers have been made to general licensees within a particular state during the reporting period, this information shall be reported to the responsible department upon request of the department.

(e) Keep records showing the name, address and the point of contact for each general licensee to whom the person directly or through an intermediate person transfers radioactive material in devices for use pursuant to the general license provided in WAC 246-233-020(4), or equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state. The records shall show the date of each transfer, the radionuclide and the quantity of radioactivity in each device transferred, the identity of any intermediate person, and compliance with the report requirements of subsection (4) of this section.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-093, filed 6/8/98, effective 7/9/98.]

WAC 246-235-095 Manufacture, assembly, or distribution of luminous safety devices, certain calibration sources or ice detectors under general license. (1) *Special requirements for the manufacture, assembly or repair of luminous safety devices for use in aircraft.* An application for a specific license to manufacture, assemble or repair lumi-

nous safety devices containing tritium or promethium-147 for use in aircraft for distribution to persons generally licensed under WAC 246-233-020(5) will be approved subject to the following conditions:

(a) The applicant satisfies the general requirements specified in WAC 246-235-020; and

(b) The applicant satisfies the requirements of Sections 32.53, 32.54, 32.55, 32.56, 32.101 of 10 CFR Part 32 or their equivalent.

(2) *Special requirements for license to manufacture calibration sources containing americium-241, plutonium or radium-226 for distribution to persons generally licensed under WAC 246-233-020(7).* An application for a specific license to manufacture calibration and reference sources containing americium-241, plutonium or radium-226 to persons generally licensed under WAC 246-233-020(7) will be approved subject to the following conditions:

(a) The applicant satisfies the general requirement of WAC 246-235-020; and

(b) The applicant satisfies the requirements of Sections 32.57, 32.58, 32.59, 32.102 of 10 CFR Part 32 and Section 70.39 of 10 CFR Part 70 or their equivalent.

(3) *Licensing the manufacture and distribution of ice detection devices.* An application for a specific license to manufacture and distribute ice detection devices to persons generally licensed under WAC 246-233-020(9) will be approved subject to the following conditions:

(a) The applicant satisfies the general requirements of WAC 246-235-020; and

(b) The criteria of Sections 32.61, 32.62, 32.103 of 10 CFR Part 32 are met.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-095, filed 6/8/98, effective 7/9/98.]

WAC 246-235-097 Manufacture and distribution of radioactive material for certain in vitro clinical or laboratory testing under general license. An application for a specific license to manufacture or distribute radioactive material for use under the general license of WAC 246-233-020(8) will be approved if:

(1) The applicant satisfies the general requirements specified in WAC 246-235-020;

(2) The radioactive material is to be prepared for distribution in prepackaged units of:

(a) Iodine-125 in units not exceeding 10 microcuries each;

(b) Iodine-131 in units not exceeding 10 microcuries each;

(c) Carbon-14 in units not exceeding 10 microcuries each;

(d) Hydrogen-3 (tritium) in units not exceeding 50 microcuries each;

(e) Iron-59 in units not exceeding 20 microcuries each;

(f) Cobalt-57 in units not exceeding 10 microcuries each;

(g) Selenium-75 in units not exceeding 10 microcuries each;

(h) Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each.

(2003 Ed.)

(3) Each prepackaged unit bears a durable, clearly visible label:

(a) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 10 microcuries of iodine-125, iodine-131, carbon-14, cobalt-57, or selenium-75; 50 microcuries of hydrogen-3 (tritium); 20 microcuries of iron-59; or Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each; and

(b) Displaying the radiation caution symbol described in WAC 246-221-120 (1)(a) and the words, "CAUTION, RADIOACTIVE MATERIAL," and "Not for internal or external use in humans or animals."

(4) One of the following statements, as appropriate, or a substantially similar statement which contains the information called for in one of the following statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

(a) This radioactive material may be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of the United States Nuclear Regulatory Commission or of a state with which the commission has entered into an agreement for the exercise of regulatory authority.

.....
Name of manufacturer

(b) This radioactive material may be received, acquired, possessed and used only by physicians, veterinarians, clinical laboratories or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use and transfer are subject to the regulations and a general license of a licensing state.

.....
Name of manufacturer

(5) The label affixed to the unit, or the leaflet or brochure which accompanies the package, contains adequate information as to the precautions to be observed in handling and storing such radioactive material. In the case of the Mock Iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in WAC 246-221-170 of these regulations.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-097, filed 6/8/98, effective 7/9/98.]

WAC 246-235-100 Manufacture, preparation, or commercial transfer of radiopharmaceuticals for medical use. (1) An application for a specific license to manufacture and, prepare, or transfer for commercial distribution radiopharmaceuticals containing radioactive material for use by

persons licensed pursuant to WAC 246-235-080 (1), (2), or (3) for medical use in humans will be approved if:

(a) The applicant satisfies the general requirements specified in WAC 246-235-020 of this part;

(b) The applicant submits evidence that:

(i) The applicant is registered or licensed with the U.S. Food and Drug Administration (FDA) as a drug manufacturer; or

(ii) The applicant is licensed as a nuclear pharmacy by the state board of pharmacy;

(c) The applicant submits information on the radionuclide, chemical and physical form, maximum activity per vial, syringe, generator, or other container of the radiopharmaceutical, and shielding provided by the packaging of the radioactive material which is appropriate for safe handling and storage of radiopharmaceuticals by medical use licensees; and

(d) The applicant satisfies the labeling requirements specified by the state board of pharmacy in WAC 246-903-020. For a drug manufacturer, the labels required by this subsection are in addition to the labeling required by the Food and Drug Administration (FDA) and may be separate from or, with the approval of FDA, may be combined with the labeling required by FDA.

(2) A nuclear pharmacy licensee:

(a) May prepare radiopharmaceuticals for medical use provided the radiopharmaceutical is prepared by or under the supervision of an authorized nuclear pharmacist.

(b) May allow a pharmacist to work as an authorized nuclear pharmacist if this individual meets the state board of pharmacy requirements in WAC 246-903-030, Nuclear pharmacists.

(c) Shall provide to the department a copy of each individual's letter of notification from the state board of pharmacy recognizing the individual as a nuclear pharmacist, no later than thirty days after the date the licensee allows the individual to work as an authorized nuclear pharmacist pursuant to (b) of this subsection.

(3) A manufacturer or nuclear pharmacy licensee shall possess and use instrumentation to measure the radioactivity of radiopharmaceuticals. The licensee shall have procedures for use of the instrumentation. The licensee shall measure, by direct measurement or by combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta-, or photon-emitting radiopharmaceuticals, prior to transfer for commercial distribution. In addition, the licensee shall:

(a) Perform tests before initial use, periodically, and following repair, on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument; and make adjustments when necessary; and

(b) Check each instrument for constancy and proper operation at the beginning of each day of use.

(4) Nothing in this section relieves the licensee from complying with applicable FDA, other Federal, and state requirements governing radiopharmaceuticals.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-100, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-100, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-100, filed 12/27/90, effective 1/31/91. Statutory

Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-22-110, filed 12/8/80. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-110, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-076.]

WAC 246-235-102 Manufacture and distribution of sources or devices containing radioactive material for medical use. An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to WAC 246-235-080(3) for use as a calibration or reference source or for the uses listed in Group VI of WAC 246-235-120 Schedule A of this part will be approved if:

(1) The applicant satisfies the general requirements in WAC 246-235-020 of this part;

(2) The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

(a) The radioactive material contained, its chemical and physical form and amount;

(b) Details of design and construction of the source or device;

(c) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and accidents;

(d) For devices containing radioactive material, the radiation profile of a prototype device;

(e) Details of quality control procedures to assure that production sources and devices meet the standards of the design and prototype tests;

(f) Procedures and standards for calibrating sources and devices;

(g) Legend and methods for labeling sources and devices as to their radioactive content; and

(h) Instructions for handling and storing the source or device from the radiation safety standpoint, these instructions are to be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device: Provided, That instructions which are too lengthy for such label may be summarized on the label and printed in detail on a brochure which is referenced on the label.

(3) The label affixed to the source or device, or to the permanent storage container for the source or device, contains information on the radionuclide, quantity and date of assay, and a statement that the named source or device is licensed by the department for distribution to persons licensed pursuant to WAC 246-235-080(3) and Group VI of WAC 246-235-120 Schedule A or under equivalent regulations of the United States Nuclear Regulatory Commission, an agreement state or a licensing state: Provided, That such labeling for sources which do not require long term storage (e.g., gold-198 seeds) may be on a leaflet or brochure which accompanies the source.

(4) In the event the applicant desires that the source or device be required to be tested for leakage of radioactive material at intervals longer than six months, the applicant shall include in the application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the source or device or similar sources or

devices and by design features that have a significant bearing on the probability or consequences of leakage of radioactive material from the source.

(5) In determining the acceptable interval for test of leakage of radioactive material, the department will consider information that includes, but is not limited to:

- (a) Primary containment (source capsule);
- (b) Protection of primary containment;
- (c) Method of sealing containment;
- (d) Containment construction materials;
- (e) Form of contained radioactive material;
- (f) Maximum temperature withstood during prototype tests;
- (g) Maximum pressure withstood during prototype tests;
- (h) Maximum quantity of contained radioactive material;
- (i) Radiotoxicity of contained radioactive material; and
- (j) Operating experience with identical sources or devices or similarly designed and constructed sources or devices.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-235-102, filed 6/8/98, effective 7/9/98.]

WAC 246-235-105 Manufacture, assembly or distribution of radioactive material exempt from regulation.

(1) *Licensing the introduction of radioactive material into products in exempt concentrations.* In addition to the requirements set forth in WAC 246-235-020, a specific license authorizing the introduction of radioactive material into a product or material owned by or in the possession of the licensee or another to be transferred to persons exempt under WAC 246-232-010(1) will be issued if:

(a) The applicant submits a description of the product or material into which the radioactive material will be introduced, intended use of the radioactive material and the product or material into which it is introduced, method of introduction, initial concentration of the radioactive material in the product or material, control methods to assure that no more than the specified concentration is introduced into the product or material, estimated time interval between introduction and transfer of the product or material, and estimated concentration of the radioactive material in the product or material at the time of transfer; and

(b) The applicant provides reasonable assurance that the concentrations of radioactive material at the time of transfer will not exceed the concentrations in WAC 246-232-130, Schedule C, that reconstruction of the radioactive material in concentrations exceeding those in WAC 246-232-130, Schedule C, is not likely, that use of lower concentrations is not feasible, and that the product or material is not likely to be incorporated in any food, beverage, cosmetic, drug or other commodity or product designed for ingestion or inhalation by, or application to a human being.

(c) Each person licensed under subsection (1) of this section shall file an annual report with the department which shall identify the type and quantity of each product or material into which radioactive material has been introduced during the reporting period; name and address of the person who owned or possessed the product and material, into which radioactive material has been introduced, at the time of introduction; the type and quantity of radionuclide introduced into

each such product or material; and the initial concentrations of the radionuclide in the product or material at time of transfer of the radioactive material by the licensee. If no transfers of radioactive material have been made pursuant to subsection (1) of this section during the reporting period, the report shall so indicate. The report shall cover the year ending June 30, and shall be filed within thirty days thereafter.

(2) Licensing the distribution of certain radioactive material in exempt quantities.*

*Note: Authority to transfer possession or control by the manufacturer, processor or producer of any equipment, device, commodity or other product containing source material or byproduct material whose subsequent possession, use, transfer and disposal by all other persons who are exempted from regulatory requirements may be obtained only from the United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(a) An application for a specific license to distribute naturally occurring and accelerator-produced radioactive material (NARM) to persons exempted from these regulations pursuant to WAC 246-232-010 (2)(b) will be approved if:

(i) The radioactive material is not contained in any food, beverage, cosmetic, drug or other commodity designed for ingestion or inhalation by, or application to, a human being;

(ii) The radioactive material is in the form of processed chemical elements, compounds, or mixtures, tissue samples, bioassay samples, counting standards, plated or encapsulated sources, or similar substances, identified as radioactive and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product, or device intended for commercial distribution; and

(iii) The applicant submits copies of prototype labels and brochures and the department approves such labels and brochures.

(b) The license issued under paragraph (2)(a) of this section is subject to the following conditions:

(i) No more than ten exempt quantities shall be sold or transferred in any single transaction. However, an exempt quantity may be composed of fractional parts of one or more of the exempt quantity provided the sum of the fractions shall not exceed unity.

(ii) Each exempt quantity shall be separately and individually packaged. No more than ten such packaged exempt quantities shall be contained in any outer package for transfer to persons exempt pursuant to WAC 246-232-010 (2)(b). The outer package shall be such that the dose rate at the external surface of the package does not exceed 0.5 millirem per hour.

(iii) The immediate container of each quantity or separately packaged fractional quantity of radioactive material shall bear a durable, legible label which:

(A) Identifies the radionuclide and the quantity of radioactivity; and

(B) Bears the words "radioactive material."

(iv) In addition to the labeling information required by item (2)(b)(iii) of this section, the label affixed to the immediate container, or an accompanying brochure, shall:

(A) State that the contents are exempt from licensing state requirements;

(B) Bear the words "Radioactive material—Not for human use—Introduction into foods, beverages, cosmetics, drugs, or medicinals, or into products manufactured for com-

mercial distribution is prohibited—Exempt quantities should not be combined"; and

(C) Set forth appropriate additional radiation safety precautions and instructions relating to the handling, use, storage and disposal of the radioactive material.

(c) Each person licensed under paragraph (2)(a) of this section shall maintain records identifying, by name and address, each person to whom radioactive material is transferred for use under WAC 246-232-010 (2)(b) or the equivalent regulations of a licensing state, and stating the kinds and quantities of radioactive material transferred. An annual summary report stating the total quantity of each radionuclide transferred under the specific license shall be filed with the department. Each report shall cover the year ending June 30, and shall be filed within thirty days thereafter. If no transfers of radioactive material have been made pursuant to subsection (2) of this section during the reporting period, the report shall so indicate.

(3) *Licensing the incorporation of naturally occurring and accelerator-produced radioactive material into gas and aerosol detectors.* An application for a specific license authorizing the incorporation of NARM into gas and aerosol detectors to be distributed to persons exempt under WAC 246-232-012 will be approved if the application satisfies requirements equivalent to those contained in Section 32.26 of 10 CFR Part 32.

[Statutory Authority: RCW 70.98.050, 01-02-067, § 246-235-105, filed 12/29/00, effective 1/29/01; 98-13-037, § 246-235-105, filed 6/8/98, effective 7/9/98.]

WAC 246-235-110 Special requirements for issuance of specific licenses for source material milling. In addition to the requirements set forth in WAC 246-235-020, a specific license for source material milling will be issued if the applicant submits to the department a satisfactory application as described herein and meets the other conditions specified below:

(1) An application for a license to receive title to, receive, possess, and use source material for milling or byproduct material as defined in WAC 246-220-010 shall address the following:

(a) Description of the proposed project or action.

(b) Area/site characteristics including geology, demography, topography, hydrology and meteorology.

(c) Radiological and nonradiological impacts of the proposed project or action, including waterway and groundwater impacts.

(d) Environmental effects of accidents.

(e) Tailings disposal and decommissioning.

(f) Site and project alternatives.

(g) Description of how the provisions of chapter 246-252 WAC shall be met.

(2) Pursuant to WAC 246-235-080 (6)(a)(i) the applicant shall not commence construction of the project until the department has weighed the environmental, economic, technical, and other benefits against the environmental costs and has concluded that the issuance of the license is appropriate.

(3) Prior to issuance of a license, a public hearing shall be held. The scope shall extend to the question of license

issuance and the adequacy of the reclamation, disposal, decommissioning, and decontamination plans.

(4) At least one full year prior to any major site construction, a preoperational monitoring program shall be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program shall be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

(5) Prior to issuance of the license, the mill operator shall establish financial surety arrangements consistent with the requirements of WAC 246-252-030.

(6) The applicant shall provide procedures describing the means employed to meet the following requirements during the operational phase of any project.

(a) Milling operations shall be conducted so that all effluent releases are reduced to as low as is reasonably achievable below the limits of chapter 246-221 WAC.

(b) The mill operator shall conduct at least daily inspection of any tailings or waste retention systems. Records of such inspections shall be maintained for review by the department.

(c) The mill operator shall immediately notify the department of the following:

(i) Any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas; and

(ii) Any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

(7) An application for a license to own, receive, possess and use byproduct material as defined in WAC 246-220-010 shall contain proposed specifications relating to the emissions control and disposition of the byproduct material to achieve the requirements and objectives set forth in the criteria listed in WAC 246-252-030.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-110, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-150, filed 12/11/86. Statutory Authority: Chapter 70.121 RCW, 81-16-031 (Order 1683), § 402-22-150, filed 7/28/81.]

WAC 246-235-120 Schedule A groups of medical uses of radioactive material (ref. WAC 246-235-080(3) and 246-235-100(9)). (1) *Group I.* Use of prepared radiopharmaceuticals for certain diagnostic studies involving measurements of uptake, dilution and excretion. This group does not include imaging or localization studies.

(a) Any radioactive material in a radiopharmaceutical and for a diagnostic use involving measurements of uptake, dilution or excretion obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical

uses, or an individual under the supervision of either as permitted by statute.

(b) The provisions of (a) of this subsection notwithstanding, no radioactive material in gaseous form or for use as an aerosol is permitted by this subsection except as specifically authorized in a license.

(2) *Group II.* Use of prepared radiopharmaceuticals for diagnostic imaging and localization studies.

(a) Any radioactive material in a radiopharmaceutical and for a diagnostic use involving imaging or localizing obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute;

(b) The provisions of (a) of this subsection notwithstanding, no radioactive material in gaseous form or for use as an aerosol is permitted by this subsection except as specifically authorized by a license or subsection (3)(b) of this section.

(3) *Group III.* Use of generators and reagent kits for the preparation and use of radiopharmaceuticals containing radioactive material for diagnostic imaging and localization studies.

(a) Any generator or reagent kit for preparation and diagnostic use of a radiopharmaceutical containing radioactive material obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute.

(b) The provisions of (a) of this subsection notwithstanding, no generator or reagent kit is authorized for preparation of any gaseous form or aerosol of a radioactive material, except Technetium-99m as sodium pentetate as an aerosol for pulmonary function studies when used only with an approved and shielded delivery system, and disposed in accordance with applicable requirements, or as specifically authorized in a license.

(4) *Group IV.* Use of prepared radiopharmaceuticals for certain therapeutic uses that do not normally require hospitalization for purposes of radiation safety.

(a) Iodine-131 as iodide for treatment of hyperthyroidism and cardiac dysfunction;

(b) Phosphorus-32 as soluble phosphate for treatment of polycythemia vera, leukemia and bone metastases;

(c) Phosphorus-32 as colloidal chromic phosphate for intracavitary treatment of malignant effusions;

(d) Any radioactive material in a radiopharmaceutical and for a therapeutic use not normally requiring hospitalization for purposes of radiation safety obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute.

(5) *Group V.* Use of prepared radiopharmaceuticals for certain therapeutic uses that normally require hospitalization for purposes of radiation safety.

(a) Gold-198 as colloid for intracavitary treatment of malignant effusions;

(b) Iodine-131 as iodide for treatment of thyroid carcinoma;

(c) Any radioactive material in a radiopharmaceutical and for a therapeutic use normally requiring hospitalization for radiation safety reasons obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for this group of medical uses, or an individual under the supervision of either as permitted by statute.

(6) *Group VI.* Use of sources and devices containing radioactive material for certain medical uses.

(a) Americium-241 as a sealed source in a device for bone mineral analysis;

(b) Cesium-137 encased in needles and applicator cells for topical, interstitial, and intracavitary treatment of cancer;

(c) Cobalt-60 encased in needles and applicator cells for topical, interstitial, and intracavitary treatment of cancer;

(d) Gold-198 as seeds for interstitial treatment of cancer;

(e) Iodine-125 as a sealed source in a device for bone mineral analysis;

(f) Gadolinium-153 as a sealed source in a device for bone mineral analysis;

(g) Iridium-192 as seeds encased in nylon ribbon for interstitial treatment of cancer;

(h) Strontium-90 sealed in an applicator for treatment of superficial eye conditions; and

(i) Iodine-125 as seeds for interstitial treatment of cancer.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-235-120, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-200, filed 12/11/86. Statutory Authority: RCW 70.98.050, 81-01-011 (Order 1570), § 402-22-200, filed 12/8/80. Statutory Authority: RCW 70.98.080, 79-12-073 (Order 1459), § 402-22-200, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-260.]

WAC 246-235-130 Appendix—General laboratory rules for safe use of unsealed sources. (1) In addition to the requirements set forth in WAC 246-235-020, a specific licensee who uses unsealed, unplated and/or liquid sources shall possess adequate facilities including ventilation systems which are compatible with the proposed uses: and,

(2) Possess, use, and store, radioactive materials in accordance with, but not limited to, the following:

(a) Receive, handle, and store radioactive materials only at specifically designated locations within the applicant's facility. Vessels containing radioactive material must be labeled as required by chapter 246-221 WAC.

(b) Wear disposable gloves at all times when handling dispersible radioactive material or potentially contaminated items.

(c) Wear personnel monitoring devices (film badge and/or TLD), when required, at all times when working with, or in the vicinity of, radioactive materials. Extremity doses shall be considered in evaluating the need for separate extremity dosimeters. Extremity dosimetry should be worn when working with millicurie or greater quantities of material (excluding low energy beta emitters and pure alpha emitters). Monitoring devices, when not in use, shall be stored only in a designated low-background area. Calculations based on whole body badge results for photon emitters may be used in lieu of separate extremity dosimeters.

(d) Use remote tools, lead shields, lead-glass shields, and/or plexiglass shields as appropriate.

(e) Prohibit eating, chewing, drinking, smoking, and application of cosmetics in any area where radioactive material is used or stored.

(f) Do not store food, drink or personal effects in any area, container, or refrigerator designated for radioactive materials use or storage.

(g) Do not pipette radioactive materials or perform any similar operation by employing mouth suction.

(h) Use disposable absorbent material with impervious backing to cover work surfaces where spillage is possible.

(i) Properly dress and protect open wounds on exposed body surfaces before working with radioactive materials.

(j) Wear laboratory coats when working with radioactive material. Potentially contaminated laboratory coats shall not be worn outside the immediate work area.

(k) Nuclides in gaseous or volatile form, or with a high potential for volatilization shall be used only in areas with adequate ventilation systems.

[Statutory Authority: RCW 70.98.050, 94-01-073, § 246-235-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-235-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-235-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-22-240, filed 12/11/86; 83-19-050 (Order 2026), § 402-22-240, filed 9/16/83.]

WAC 246-235-140 Schedule B, limits for broad licenses. (See also WAC 246-235-090)

Radioactive Material	Col. I curies	Col. II curies
Antimony-122	1	0.01
Antimony-124	1	0.01
Antimony-125	1	0.01
Arsenic-73	10	0.1
Arsenic-74	1	0.01
Arsenic-76	1	0.01
Arsenic-77	10	0.1
Barium-131	10	0.1
Barium-140	1	0.01
Beryllium-7	10	0.1
Bismuth-210	0.1	0.001
Bromine-82	10	0.1
Cadmium-109	1	0.01
Cadmium-115m	1	0.01
Cadmium-115	10	0.1
Calcium-45	1	0.01
Calcium-47	10	0.1

Radioactive Material	Col. I curies	Col. II curies
Carbon-14	100	1.
Cerium-141	10	0.1
Cerium-143	10	0.1
Cerium-144	0.1	0.001
Cesium-131	100	1.
Cesium-134m	100	1.
Cesium-134	0.1	0.001
Cesium-135	1	0.01
Cesium-136	10	0.1
Cesium-137	0.1	0.001
Chlorine-36	1	0.01
Chlorine-38	100	1.
Chromium-51	100	1.
Cobalt-57	10	0.1
Cobalt-58m	100	1.
Cobalt-58	1	0.01
Cobalt-60	0.1	0.001
Copper-64	10	0.1
Dysprosium-165	100	1.
Dysprosium-166	10	0.1
Erbium-169	10	0.1
Erbium-171	10	0.1
Europium-152 (9.2h)	10	0.1
Europium-152 (13 y)	0.1	0.001
Europium-154	0.1	0.001
Europium-155	1	0.01
Fluorine-18	100	1.
Gadolinium-153	1	0.01
Gadolinium-159	10	0.1
Gallium-72	10	0.1
Germanium-71	100	1.
Gold-198	10	0.1
Gold-199	10	0.1
Hafnium-181	1	0.01
Holmium-166	10	0.1
Hydrogen-3	100	1.
Indium-113m	100	1.
Indium-114m	1	0.01
Indium-115m	100	1.
Indium-115	1	0.01
Iodine-125	0.1	0.001
Iodine-126	0.1	0.001
Iodine-129	0.1	0.001
Iodine-131	0.1	0.001
Iodine-132	10	0.1
Iodine-133	1	0.01
Iodine-134	10	0.1
Iodine-135	1	0.01
Iridium-192	1	0.01
Iridium-194	10	0.1
Iron-55	10	0.1
Iron-59	1	0.01
Krypton-85	100	1.
Krypton-87	10	0.1
Lanthanum-140	1	0.01
Lutetium-177	10	0.1
Manganese-52	1	0.01
Manganese-54	1	0.01

Radioactive Material	Col. I curies	Col. II curies	Radioactive Material	Col. I curies	Col. II curies
Manganese-56	10	0.1	Strontium-91	10	0.1
Mercury-197m	10	0.1	Strontium-92	10	0.1
Mercury-197	10	0.1	Sulphur-35	10	0.1
Mercury-203	1	0.01	Tantalum-182	1	0.01
Molybdenum-99	10	0.1	Technetium-96	10	0.1
Neodymium-147	10	0.1	Technetium-97m	10	0.1
Neodymium-149	10	0.1	Technetium-97	10	0.1
Nickel-59	10	0.1	Technetium-99m	100	1.
Nickel-63	1	0.01	Technetium-99	1	0.01
Nickel-65	10	0.1	Tellurium-125m	1	0.01
Niobium-93m	1	0.01	Tellurium-127m	1	0.01
Niobium-95	1	0.01	Tellurium-127	10	0.1
Niobium-97	100	1.	Tellurium-129m	1	0.01
Osmium-185	1	0.01	Tellurium-129	100	1.
Osmium-191m	100	1.	Tellurium-131m	10	0.1
Osmium-191	10	0.1	Tellurium-132	1	0.01
Osmium-193	10	0.1	Terbium-160	1	0.01
Palladium-103	10	0.1	Thallium-200	10	0.1
Palladium-109	10	0.1	Thallium-201	10	0.1
Phosphorus-32	1	0.01	Thallium-202	10	0.1
Platinum-191	10	0.1	Thallium-204	1	0.01
Platinum-193m	100	1.	Thulium-170	1	0.01
Platinum-193	10	0.1	Thulium-171	1	0.01
Platinum-197m	100	1.	Tin-113	1	0.01
Platinum-197	10	0.1	Tin-125	1	0.01
Polonium-210	0.01	0.0001	Tungsten-181	1	0.01
Potassium-42	1	0.01	Tungsten-185	1	0.01
Praseodymium-142	10	0.1	Tungsten-187	10	0.1
Praseodymium-143	10	0.1	Vanadium-48	1	0.01
Promethium-147	1	0.01	Xenon-131m	1,000	10.
Promethium-149	10	0.1	Xenon-133	100	1.
Radium-226	0.01	0.0001	Xenon-135	100	1.
Rhenium-186	10	0.1	Ytterbium-175	10	0.1
Rhenium-188	10	0.1	Yttrium-90	1	0.01
Rhodium-103m	1,000	10.	Yttrium-91	1	0.01
Rhodium-105	10	0.1	Yttrium-92	10	0.1
Rubidium-86	1	0.01	Yttrium-93	1	0.01
Rubidium-87	1	0.01	Zinc-65	1	0.01
Ruthenium-97	100	1.	Zinc-69m	10	0.1
Ruthenium-103	1	0.01	Zinc-69	100	1.
Ruthenium-105	10	0.1	Zirconium-93	1	0.01
Ruthenium-106	0.1	0.001	Zirconium-95	1	0.01
Samarium-151	1	0.01	Zirconium-97	1	0.01
Samarium-153	10	0.1	Any radioactive material other than source material, special nuclear material, or alpha emitting radioactive material not listed above.	0.1	0.001
Scandium-46	1	0.01			
Scandium-47	10	0.1			
Scandium-48	1	0.01			
Selenium-75	1	0.01			
Silicon-31	10	0.1			
Silver-105	1	0.01			
Silver-110m	0.1	0.001			
Silver-111	10	0.1			
Sodium-22	0.1	0.001			
Sodium-24	1	0.01			
Strontium-85m	1,000	10.			
Strontium-85	1	0.01			
Strontium-89	1	0.01			
Strontium-90	0.01	0.0001			

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-235-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-235-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-22-250, filed 11/30/79, effective 1/1/80. Formerly WAC 402-20-270.]

WAC 246-235-150 Schedule C—Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release.

Radioactive material ¹	Release fraction	Possession limit (curies)	Radioactive material ¹	Release fraction	Possession limit (curies)
Actinium-228	0.001	4,000	Promethium-145	.01	4,000
Americium-241	.001	2	Promethium-147	.01	4,000
Americium-242	.001	2	Ruthenium-106	.01	200
Americium-243	.001	2	Samarium-151	.01	4,000
Antimony-124	.01	4,000	Scandium-46	.01	3,000
Antimony-126	.01	6,000	Selenium-75	.01	10,000
Barium-133	.01	10,000	Silver-110m	.01	1,000
Barium-140	.01	30,000	Sodium-22	.01	9,000
Bismuth-207	.01	5,000	Sodium-24	.01	10,000
Bismuth-210	.01	600	Strontium-89	.01	3,000
Cadmium-109	.01	1,000	Strontium-90	.01	90
Cadmium-113	.01	80	Sulfur-35	.5	900
Calcium-45	.01	20,000	Technetium-99	.01	10,000
Californium-252 ²	.001	9	Technetium-99m	.01	400,000
Carbon-14 ³	.01	50,000	Tellurium-127m	.01	5,000
Cerium-141	.01	10,000	Tellurium-129m	.01	5,000
Cerium-144	.01	300	Terbium-160	.01	4,000
Cesium-134	.01	2,000	Thulium-170	.01	4,000
Cesium-137	.01	3,000	Tin-113	.01	10,000
Chlorine-36	.5	100	Tin-123	.01	3,000
Chromium-51	.01	300,000	Tin-126	.01	1,000
Cobalt-60	.001	5,000	Titanium-44	.01	100
Copper-64	.01	200,000	Uranium Hexafluoride	.001	Note ⁴
Curium-242	.001	60	Vanadium-48	.01	7,000
Curium-243	.001	3	Xenon-133	1.0	900,000
Curium-244	.001	4	Yttrium-91	.01	2,000
Curium-245	.001	2	Zinc-65	.01	5,000
Europium-152	.01	500	Zirconium-93	.01	400
Europium-154	.01	400	Zirconium-95	.01	5,000
Europium-155	.01	3,000	Any other beta-gamma emitter	.01	10,000
Germanium-68	.01	2,000	Mixed fission products	.01	1,000
Gadolinium-153	.01	5,000	Mixed corrosion products	.01	10,000
Gold-198	.01	30,000	Contaminated equipment beta-gamma	.001	10,000
Hafnium-172	.01	400	Irradiated material, any form other than solid non-combustible	.01	1,000
Hafnium-181	.01	7,000	Irradiated material, solid noncombustible	.001	10,000
Holmium-166m	.01	100	Mixed radioactive waste, beta-gamma	.01	1,000
Hydrogen-3	.5	20,000	Packaged mixed waste, beta-gamma ⁵	.001	10,000
Iodine-125	.5	10	Any other alpha emitter	.001	2
Iodine-131	.5	10	Contaminated equipment, alpha	.0001	20
Indium-114m	.01	1,000	Packaged waste, alpha ⁵	.0001	20
Iridium-192	.001	40,000	Combinations of radioactive materials listed above ¹		
Iron-55	.01	40,000			
Iron-59	.01	7,000			
Krypton-85	1.0	6,000,000			
Lead-210	.01	8			
Manganese-56	.01	60,000			
Mercury-203	.01	10,000			
Molybdenum-99	.01	30,000			
Neptunium-237	.001	2			
Nickel-63	.01	20,000			
Niobium-94	.01	300			
Phosphorus-32	.5	100			
Phosphorus-33	.5	1,000			
Polonium-210	.01	10			
Potassium-42	.01	9,000			

¹ For combinations of radioactive materials, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Schedule C exceeds one.

² For Californium-252, the quantity may also be expressed as 20 milligrams.

³ Excludes Carbon-14 as carbon dioxide.

⁴ For uranium hexafluoride, the quantity is 50 kilograms in a single container or 1,000 kilograms total.

⁵ Waste packaged in Type B containers does not require an emergency plan.

[Statutory Authority: RCW 70.98.050, 95-01-108, § 246-235-150, filed 12/21/94, effective 1/21/95.]

Chapter 246-239 WAC

RADIATION PROTECTION—NUCLEAR MEDICINE

WAC

246-239-001	Purpose and scope.
246-239-010	Definitions.
246-239-020	Radiation safety committee.
246-239-022	Policy and procedures for radiopharmaceutical administration.
246-239-025	Notifications, records, and reports of radiopharmaceutical misadministrations.
246-239-030	Personnel monitoring.
246-239-035	Bioassay.
246-239-040	Radiopharmaceuticals.
246-239-050	Radionuclide generators.
246-239-055	Release of individuals containing radiopharmaceuticals.
246-239-060	Laboratory safety.
246-239-070	Surveys.
246-239-080	Calibration and reference sources.
246-239-090	Instrumentation.
246-239-100	Radioactive gases.

WAC 246-239-001 Purpose and scope. The provisions of this chapter apply to all licensees utilizing radioactive materials in the practice of nuclear medicine and establish radiation safety requirements for those licensees. These provisions are in addition to, and not in substitution for, other applicable provisions of these regulations.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-239-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 83-19-050 (Order 2026), § 402-34-010, filed 9/16/83.]

WAC 246-239-010 Definitions. (1) "Authorized nuclear pharmacist" means a pharmacist who is identified as an authorized nuclear pharmacist on a department license that authorizes the use of radioactive material in the practice of nuclear pharmacy.

(2) "Authorized user" means a physician who is identified as an authorized user on a department, U.S. Nuclear Regulatory Commission or agreement state license that authorizes the medical use of radioactive material.

(3) "Diagnostic clinical procedures manual" means a collection of written procedures that describes each method (and other instructions and precautions) by which the licensee performs diagnostic clinical procedures; where each diagnostic clinical procedure has been approved by the authorized user and includes the radiopharmaceutical, dosage, and route of administration.

(4) "Medical use" means the intentional internal or external administration of radioactive material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

(5) "Nuclear medicine" means the intentional internal or external administration of unsealed radioactive material to human beings.

(6) "Nuclear medicine technologist" means any individual who performs nuclear medical procedures under the supervision of a physician licensed pursuant to chapter 246-235 WAC.

(2003 Ed.)

(7) "Prescribed dosage" means the quantity of radiopharmaceutical activity as documented:

(a) In a written directive; or

(b) Either in the diagnostic clinical procedures manual or in any appropriate record in accordance with the directions of the authorized user for diagnostic procedures.

(8) "Radiopharmaceutical misadministration" means the administration of:

(a) A radiopharmaceutical dosage greater than 30 microcuries of sodium iodide I-125 or I-131:

(i) Involving the wrong individual or wrong radiopharmaceutical; or

(ii) When both the administered dosage differs from the prescribed dosage by more than twenty percent of the prescribed dosage, and the difference between the administered dosage and prescribed dosage exceeds 30 microcuries;

(b) A therapeutic radiopharmaceutical dosage, other than sodium iodide I-125 or I-131:

(i) Involving the wrong individual, wrong radiopharmaceutical, or wrong route of administration; or

(ii) When the administered dosage differs from the prescribed dosage by more than twenty percent of the prescribed dosage;

(c) A diagnostic radiopharmaceutical dosage, other than quantities greater than 30 microcuries of sodium iodide I-125 or I-131, both:

(i) Involving the wrong individual, wrong radiopharmaceutical, wrong route of administration, or when the administered dosage differs from the prescribed dosage; and

(ii) When the dose to the individual exceeds 5 rems effective dose equivalent or 50 rems dose equivalent to any individual organ.

(9) "Recordable event" means the administration of:

(a) A radiopharmaceutical without a written directive where a written directive is required;

(b) A radiopharmaceutical where a written directive is required without daily recording of each administered radiopharmaceutical dosage in the appropriate record;

(c) A radiopharmaceutical dosage greater than 30 microcuries of either sodium iodide I-125 or I-131 when both:

(i) The administered dosage differs from the prescribed dosage by more than 10 percent of the prescribed dosage; and

(ii) The difference between the administered dosage and prescribed dosage exceeds 15 microcuries;

(d) A therapeutic radiopharmaceutical dosage, other than sodium iodide I-125 or I-131, when the administered dosage differs from the prescribed dosage by more than 10 percent of the prescribed dosage.

(10) "Training" means instruction or experience acquired under the direct supervision of a physician, a certified/registered nuclear medicine technologist, and/or a qualified expert who has the necessary knowledge and training to advise personnel on radiation protection.

(11) "Written directive" means an order in writing for a specific patient or human research subject, dated and signed by an authorized user prior to the administration of a radiopharmaceutical, containing the following information:

(a) For any administration of quantities greater than 30 microcuries of sodium iodide I-125 or I-131: The dosage;

(b) For a therapeutic administration of a radiopharmaceutical other than sodium iodide I-125 or I-131: The radiopharmaceutical, dosage, and route of administration.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-239-010, filed 2/21/92, effective 3/23/92; 91-15-112 (Order 184), § 246-239-010, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-030, filed 9/16/83.]

WAC 246-239-020 Radiation safety committee. (1)

Where required by license condition or pursuant to WAC 246-235-080(1), the radiation safety committee, shall meet at least once every calendar quarter. Such meetings shall be documented by written minutes and those minutes shall be maintained for inspection by the department for at least two years.

(2) Evaluation of the adequacy of the licensee's radiation safety program for radiation safety, for adherence to the policy and procedures for radiopharmaceutical administration program, and adherence to the ALARA concept shall be conducted at least once each calendar year with an interval of no more than five calendar quarters between each evaluation. Such evaluations may be performed by the radiation safety officer, a competent outside agent, or by qualified personnel at the licensee's own facility. These evaluations shall be documented, maintained for inspection by the department, and presented in a timely manner to the radiation safety committee for review and approval and, where necessary, recommend timely corrective action to the licensee's management.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-020, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-050, filed 9/16/83.]

WAC 246-239-022 Policy and procedures for radiopharmaceutical administration. (1) Each licensee shall establish and maintain a written program to provide assurance that radioactive material or radiation from radioactive material will be administered as directed by the authorized user ordering the administration. The program must include written policies and procedures to meet the following specific objectives:

(a) That, prior to administration, a written directive is prepared for:

(i) Any administration of quantities greater than 30 microcuries of sodium iodide I-131; or

(ii) Any therapeutic administration of a radiopharmaceutical, other than sodium iodide I-131. A written revision to an existing written directive may be made for any diagnostic or therapeutic procedure provided the revision is dated and signed by the authorized user prior to the administration of the radiopharmaceutical or radiobiologic dosage. If a delay would jeopardize the patient's health, and the authorized user is not personally assaying and administering the dose, an oral directive or revision to an existing written directive will be acceptable, provided the oral revision is documented immediately in the patient's chart or record, and the revised written directive is signed by the authorized user within forty-eight hours of the oral revision;

diately in the patient's chart or record, and the revised written directive is signed by the authorized user within forty-eight hours of the oral revision;

Note: A written directive is not required when an authorized user personally assays and administers a dosage provided the pertinent facts are documented as otherwise required.

(b) That, prior to each administration, the patient's identity is verified by more than one method as the individual named in the written directive;

(c) That each administration is in accordance with the written directive; and

(d) That any unintended deviation from the written directive is identified and evaluated, and appropriate action is taken.

(2) The licensee shall:

(a) Develop procedures for and conduct a review of the radiopharmaceutical administration program including, since the last review, an evaluation of:

(i) A representative sample of patient and human research subject administrations;

(ii) All recordable events; and

(iii) All misadministrations to verify compliance with all aspects of the radiopharmaceutical administration program; these reviews shall be conducted at intervals no greater than twelve months;

(b) Evaluate each of these reviews to determine the effectiveness of the radiopharmaceutical administration program and, if required, make modifications to meet the objectives of subsection (1) of this section; and

(c) Retain records of each review, including the evaluations and findings of the review, in an auditable form for three years.

(3) The licensee shall evaluate and respond, within thirty days after discovery of the recordable event, to each recordable event by:

(a) Assembling the relevant facts including the cause;

(b) Identifying what, if any, corrective action is required to prevent recurrence; and

(c) Retaining a record, in an auditable form, for three years, of the relevant facts and what corrective action, if any, was taken.

(4) The licensee shall retain:

(a) Each written directive (provided, however, that such written directive is not required if the dose is both personally assayed and administered by the authorized user); and

(b) A record of each administered radiation dose or radiopharmaceutical dosage where a written directive is required in subsection (1)(a) of this section, in an auditable form, for three years after the date of administration.

(5) The licensee may make modifications to the program to increase the program's efficiency provided the program's effectiveness is not decreased.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-022, filed 6/8/98, effective 7/9/98; 94-06-017, § 246-239-022, filed 2/22/94, effective 3/25/94.]

WAC 246-239-025 Notifications, records, and reports of radiopharmaceutical misadministrations. (1) The licensee shall notify the department by telephone at

(206) 682-5327 no later than the next calendar day after the discovery of a radiopharmaceutical misadministration.

(2) The licensee also shall notify the referring physician and the individual receiving the radiopharmaceutical misadministration (or the individual's responsible relative or guardian) of the radiopharmaceutical misadministration not later than twenty-four hours after its discovery, unless the referring physician personally informs the licensee either that the physician will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or individual receiving the radiopharmaceutical misadministration cannot be reached within twenty-four hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the radiopharmaceutical misadministration, because of any delay in notification.

(3) The licensee shall submit a written report to the department within fifteen days after discovery of the radiopharmaceutical misadministration. The written report must include the licensee's name; the prescribing physician's name; a brief description of the event; why the event occurred; the effect on the individual who received the radiopharmaceutical misadministration; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the licensee notified the individual, and if not, why not, and if there was notification, what information was provided. The report shall not include the individual's name or other information that could lead to identification of the individual. To meet the requirements of this section, the notification of the individual receiving the radiopharmaceutical misadministration may be made instead to that individual's responsible relative or guardian, when appropriate.

(4) If the individual was notified, the licensee shall also furnish, within fifteen days after discovery of the radiopharmaceutical misadministration, a written report to the individual by sending either:

(a) A copy of the report that was submitted to the department; or

(b) A brief description of both the radiopharmaceutical misadministration and the consequences, as they may affect the individual, and a statement informing the individual that the report submitted to the department can be obtained from the licensee.

(5) Each licensee shall retain a record of each radiopharmaceutical misadministration for five years. The record shall contain the names of all individuals involved (including the prescribing physician, allied health personnel, the individual who received the radiopharmaceutical misadministration, and the individual's referring physician, if applicable), the individual's Social Security number or identification number if one has been assigned, a brief description of the radiopharmaceutical misadministration, why it occurred, the effect on the individual, improvements needed to prevent recurrence, and the actions taken to prevent recurrence.

(6) Aside from the notification requirement, nothing in this section affects any rights or duties of licensees and physicians in relation to each other, to individuals receiving

radiopharmaceutical misadministrations, or to that individual's responsible relatives or guardians.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-025, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-239-025, filed 2/21/92, effective 3/23/92.]

WAC 246-239-030 Personnel monitoring. In addition to the requirements of WAC 246-221-090 and the conditions of the license, extremity monitoring (such as TLD ring badges) shall be provided and used on a monthly exchange basis for those personnel who routinely inject radiopharmaceuticals and/or elute Tc 99m/Mo 99 generators.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-030, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-090, filed 9/16/83.]

WAC 246-239-035 Bioassay. Each licensee who uses Iodine 131 for diagnostic or therapeutic purposes shall conduct a radioiodine bioassay program in accordance with the criteria set forth in Washington State Regulatory Guide 8.20, "Bioassay Program Criteria for I-125 and I-131." When radioiodine capsules are used exclusively, bioassay is required only when capsules are opened, breached, or crushed.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-035, filed 2/22/94, effective 3/25/94.]

WAC 246-239-040 Radiopharmaceuticals. (1) Radioactive material to be administered to humans shall be obtained from a manufacturer or preparer licensed pursuant to WAC 246-235-100, 10 CFR 32.72 or equivalent regulation of an agreement state or licensing state; or prepared by an authorized nuclear pharmacist, a physician who is an authorized user for the radioactive material to be administered, or an individual under the supervision of either as permitted by statute.

(2) The provisions of this part notwithstanding:

(a) No radioactive material in gaseous form or for use as an aerosol is permitted except Technetium-99m pentetate used as an aerosol for lung function studies, or as specifically authorized by license condition. Radioactive aerosols must be administered with a closed, shielded system that either is vented to the outside atmosphere through an air exhaust or provides for collection and disposal of the aerosol; and

(b) No generator or reagent kit is authorized for preparation of any gaseous form or aerosol of the radioactive material, except as specifically authorized by license condition.

(3) Radioactive material to be administered to humans shall be assayed for activity to determine the dose within ten percent accuracy of the prescribed dose prior to being administered to patients.

(a) In the absence of a certificate from a supplier which specifies the activity of each dose, the licensee shall establish written procedures for the personnel to perform assays to an accuracy of ten percent of the prescribed dose prior to being administered to patients.

(b) The licensee shall maintain for inspection by the department, records of the results of each assay performed to determine the activity of each dose administered to a patient. Records shall be maintained for two years following performance of each assay.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-040, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-100, filed 9/16/83.]

WAC 246-239-050 Radionuclide generators. (1) Any licensee who uses generators and reagent kits shall elute the generator or process radioactive material with the reagent kit in accordance with instructions which are approved by the department, the United States Nuclear Regulatory Commission, an agreement state, or a licensing state, and are furnished by the manufacturer on the label attached to, or in the leaflet or brochure, which accompanies the generator or reagent kit.

(2) Tc-99m separated from Molybdenum 99 either by elution of a Molybdenum 99/Tc-99m generator or by an extraction process shall be tested to detect, and quantify Molybdenum 99 activity prior to administration to patients. The licensee shall not administer to patients Tc-99m containing more than 0.15 microcurie (5550 becquerels) of Molybdenum 99 per mCi (37 megabecquerels) of Tc-99m. The limits for Molybdenum 99 contamination represent maximum values and Molybdenum 99 contamination should be kept as low as reasonably achievable below these limits.

(a) In the absence of a certificate from the supplier of Tc-99m which specifies the quantity of Molybdenum 99, the licensee shall establish written procedures for personnel performing tests to detect and quantify Molybdenum 99 contamination. These procedures shall include all necessary calculations and steps to be taken if activities of Molybdenum 99 in excess of the limits specified in this part are detected.

(b) Personnel performing tests to detect and quantify Molybdenum 99 contamination shall be given specific training in performing these tests prior to conducting such tests.

(c) The licensee shall maintain for inspection by the department, records of the results of each test performed to detect and quantify Molybdenum 99 contamination and records of training given to personnel performing these tests. Records shall be maintained for two years following the performance of each test and the training of personnel.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-050, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-120, filed 9/16/83.]

WAC 246-239-055 Release of individuals containing radiopharmaceuticals. (1) The licensee may authorize the release from its control of any individual who has been administered radiopharmaceuticals if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 millisieverts (0.5 rem).

[Title 246 WAC—p. 376]

(2) The licensee shall provide the released individual with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 millisievert (0.1 rem). If the dose to a breast-feeding infant or child could exceed 1 millisievert (0.1 rem) assuming there were no interruption of breast-feeding, the instructions shall also include:

(a) Guidance on the interruption or discontinuation of breast-feeding; and

(b) Information on the consequences of failure to follow the guidance.

(3) The licensee shall maintain a record of the basis for authorizing the release of an individual, for three years after the date of release, if the total effective dose equivalent is calculated by:

(a) Using the retained activity rather than the activity administered;

(b) Using an occupancy factor less than 0.25 at 1 meter;

(c) Using the biological or effective half-life; or

(d) Considering the shielding by tissue.

(4) The licensee shall maintain a record, for three years after the date of release, that instructions were provided to a breast-feeding woman if the radiation dose to the infant or child from continued breast-feeding could result in a total effective dose equivalent exceeding 5 millisieverts (0.5 rem).

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-239-055, filed 6/8/98, effective 7/9/98.]

WAC 246-239-060 Laboratory safety. In addition to those requirements found in WAC 246-235-130, the licensee shall utilize syringe shields or other shielding devices for all manipulations. Syringe shields should be used for injections whenever practicable.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-34-140, filed 12/11/86; 83-19-050 (Order 2026), § 402-34-140, filed 9/16/83.]

WAC 246-239-070 Surveys. In addition to applicable requirements found elsewhere in these regulations, and the license, each licensee shall:

(1) Monitor hands and clothing for contamination after each procedure, or before leaving the work area;

(2) Survey the laboratory preparation and injection areas for contamination after each procedure, or at the end of the day using instrumentation capable of measuring nanocurie or becquerel amounts of activity. Survey documentation shall include an area diagram or a description of the area or article and the instrumentation used, the background levels in CPM, CPS, DPS, or DPM, the date of the survey, and the initials or name of the surveyor. Such documentation shall be maintained for inspection by the department for two years.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-070, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-150, filed 9/16/83.]

(2003 Ed.)

WAC 246-239-080 Calibration and reference sources. (1) Any licensee who owns, receives, acquires, possesses, uses, or transfers calibration reference sources pursuant to the general license authorized in WAC 246-233-020(7) shall:

(a) Maintain a file or log identifying such sources, including nuclide, activity, model and serial numbers, manufacturer, date of receipt, date of transfer, and to whom transferred (where applicable);

(b) Possess at any one time, and at any one location of storage or use, no more than five uCi (0.185 megabecquerels) of Am-241 and five uCi (0.185 megabecquerels) of Pu and five uCi (0.185 megabecquerels) of Ra-226 in such sources;

(c) Store such source(s), except when the source(s) is being used, in a closed container adequately designed and constructed to contain Americium-241, Plutonium, or Radium 226 which might otherwise escape during storage; and

(d) Not use such source(s) for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(2) Any licensee who receives, possesses, or uses calibration and reference standards pursuant to the group licensing provisions of WAC 246-235-080 (3)(c):

(a) Shall conduct leak tests in accordance with WAC 246-235-080 (3)(d);

(b) Shall follow the radiation safety and handling instructions approved by the department, the United States Nuclear Regulatory Commission, and agreement state or a licensing state and furnished by the manufacturer on the label attached to the source, or permanent container thereof, or in the leaflet or brochure that accompanies the source, and maintain such instruction in a legible and conveniently available form; and

(c) Shall conduct a quarterly physical inventory to account for all sources received and possessed. Records of the inventory shall be maintained for inspection by the department, and shall include, but not be limited to, the quantities and kinds of radioactive material, the serial number of each source, location of sources, the initials or name of the person performing the inventory, and the date of inventory.

(3) Any licensee authorized for medical Group I, II, or III is also authorized to receive, use, possess, store, transfer and/or dispose of sealed sources containing Cobalt-57 in amounts not exceeding 22 millicuries (814 megabecquerels) per source which are designed, intended, and used solely for required imaging system or dose calibrator quality assurance tests.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-080, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-170, filed 9/16/83.]

WAC 246-239-090 Instrumentation. (1) Instrumentation used to conduct surveys shall be appropriate for the nuclide(s) and radiation levels present.

(2) Portable and stationary survey instruments shall be calibrated at least annually, with intervals not to exceed five

(2003 Ed.)

calendar quarters, and after any repair. Calibrations shall be done using either the licensee's procedures approved by the department or by a facility specifically licensed to perform the appropriate dose rate or contamination instrument calibrations. Records shall be maintained for inspection by the department.

(3) An operational check utilizing an appropriate check source shall be conducted daily when instruments are used.

(4) Imaging systems shall have a flood performed daily when the system is used. In addition, mobile nuclear medicine services employing imaging systems which are moved from one facility to another shall perform a flood prior to use at each location. Bar phantoms shall be performed weekly. Records of such quality assurance for imaging systems, shall be maintained for inspection by the departments.

(5) Appropriate source(s) for calibration and standardization of dose calibrators shall be used. Dose calibrators shall receive:

(a) Daily constancy checks;

(b) Quarterly linearity tests;

(c) Annual tests for accuracy; accuracy test results which show a variation greater than ten percent from the expected or calculated value shall cause the instrument to be repaired and recalibrated prior to use for assay of patient doses; and

(d) Geometry tests upon installation and following major repair.

(6) The licensee is responsible for proper and timely performance of required quality assurance procedures and tests.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-090, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-34-190, filed 9/16/83.]

WAC 246-239-100 Radioactive gases. (1) Licensees utilizing radioactive gases, such as Xenon-133 or Krypton-81m, shall have and use a ventilation system adequate for such use, including an approved trap. Radioactive gas shall be disposed only as specifically authorized by the license.

(2) Licensees utilizing radioactive gases shall maintain emissions in accordance with limits specified in chapters 246-221 and 246-247 WAC. Verification shall be documented. Such verification may be made by calculation, air samples, or the use of constant monitoring instrumentation.

(3) Licensees utilizing radioactive gas without benefit of negative air pressure in the use area shall utilize an approved and shielded delivery system and trap. Such traps shall be tested for trapping efficiency at intervals not to exceed those recommended by the trap manufacturer and replaced as recommended by the manufacturer.

[Statutory Authority: RCW 70.98.050. 94-06-017, § 246-239-100, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-239-100, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-239-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-34-210, filed 12/11/86; 83-19-050 (Order 2026), § 402-34-210, filed 9/16/83.]

[Title 246 WAC—p. 377]

Chapter 246-240 WAC

RADIATION PROTECTION—MEDICAL THERAPY

WAC

246-240-001	Scope.
246-240-010	Definitions.
246-240-015	Policy and procedures for therapy administration.
246-240-020	Interstitial, intracavitary and superficial applications.
246-240-025	Release of individuals containing permanent implants.
246-240-030	Teletherapy.
246-240-040	Special requirements for teletherapy licensees.
246-240-050	Notifications, records, and reports of therapy misadministrations.

WAC 246-240-001 Scope. The provisions of this chapter apply to all licensees who use sealed sources in the healing arts and are in addition to, and not in substitution for, other applicable provisions of these regulations.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-240-001, filed 12/27/90, effective 1/31/91; Order 1084, § 402-32-010, filed 1/14/76; Order 1, § 402-32-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-240-010 Definitions. As used in this chapter, the following definitions apply:

(1) "Authorized user" means a physician who is identified as an authorized user on a department, U.S. Nuclear Regulatory Commission or agreement state license that authorizes the medical use of radioactive material.

(2) "Brachytherapy" means a method of radiation therapy in which sealed sources are utilized to deliver a radiation dose at a distance of up to a few centimeters, by surface, intracavitary, or interstitial application.

(3) "Medical use" means the intentional internal or external administration of radioactive material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

(4) "Prescribed dose" means:

(a) For gamma stereotactic radiosurgery, the total dose as documented in the written directive;

(b) For teletherapy, the total dose and dose per fraction as documented in the written directive; or

(c) For brachytherapy, either the total source strength and exposure time, or the total dose, as documented in the written directive.

(5) "Recordable therapy event" means the administration of:

(a) Radiation without a written directive where a written directive is required;

(b) Radiation where a written directive is required without daily recording of each radiation dose in the appropriate record;

(c) A teletherapy radiation dose when the calculated weekly administered dose exceeds the weekly prescribed dose by fifteen percent or more of the weekly prescribed dose; or

(d) A brachytherapy radiation dose when the calculated administered dose differs from the prescribed dose by more than ten percent of the prescribed dose.

(6) "Teletherapy" means therapeutic irradiation in which the source of radiation is at a distance from the body.

(7) "Therapy misadministration" means the administration of:

(a) A gamma stereotactic radiosurgery radiation dose:
(i) Involving the wrong individual or wrong treatment site; or

(ii) When the calculated total administered dose differs from the total prescribed dose by more than ten percent of the total prescribed dose;

(b) A teletherapy radiation dose:

(i) Involving the wrong individual, wrong mode of treatment, or wrong treatment site;

(ii) When the treatment consists of three or fewer fractions and the calculated total administered dose differs from the total prescribed dose by more than ten percent of the total prescribed dose;

(iii) When the calculated weekly administered dose exceeds the weekly prescribed dose by thirty percent or more of the weekly prescribed dose; or

(iv) When the calculated total administered dose differs from the total prescribed dose by more than twenty percent of the total prescribed dose;

(c) A brachytherapy radiation dose:

(i) Involving the wrong individual, wrong radioisotope, or wrong treatment site (excluding, for permanent implants, seeds that were implanted in the correct site but migrated outside the treatment site);

(ii) Involving a sealed source that is leaking;

(iii) When, for a temporary implant, one or more sealed sources are not removed upon completion of the procedure; or

(iv) When the calculated administered dose to the treatment site differs from the prescribed dose by more than twenty percent of the prescribed dose.

(8) "Written directive" means an order in writing for a specific patient or human research subject, dated and signed by an authorized user prior to the administration of radiation, except as specified in (d) of this subsection, containing the following information:

(a) For gamma stereotactic radiosurgery: Target coordinates, collimator size, plug pattern, and total dose;

(b) For teletherapy: The total dose, dose per fraction, treatment site, and overall treatment period;

(c) For high-dose-rate remote after loading brachytherapy: The radioisotope, treatment site, and total dose; or

(d) For all other brachytherapy, (i) prior to implantation: The radioisotope, number of sources, and source strengths; and (ii) after implantation but prior to completion of the procedure: The radioisotope, treatment site, and total source strength and exposure time (or, equivalently, the total dose).

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-240-010, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080, 92-06-008 (Order 245), § 246-240-010, filed 2/21/92, effective 3/23/92.]

WAC 246-240-015 Policy and procedures for therapy administration. (1) Each licensee shall establish and maintain a written program to provide assurance that radioactive material or radiation from radioactive material will be administered as directed by the authorized user. The program must include written policies and procedures to meet the following specific objectives:

(a) That, prior to administration, a written directive is prepared for:

- (i) Any teletherapy radiation dose;
- (ii) Any gamma stereotactic radiosurgery radiation dose;

or

(iii) Any brachytherapy radiation dose. A written revision to an existing written directive may be made for any therapeutic procedure provided the revision is dated and signed by the authorized user prior to the administration of radioactive material or radiation from radioactive material for that therapeutic use. If a delay would jeopardize the patient's health, and the authorized user is not personally present to administer the dose, an oral directive or oral revision to an existing written directive by the authorized user will be acceptable provided the oral directive or oral revision is documented immediately in the patient's chart or record, and the revised written directive is signed by the authorized user within forty-eight hours of the oral revision. Note: A written directive is not required when an authorized user personally assays and administers a dosage, provided the pertinent facts are documented as otherwise required;

(b) That, prior to each administration, the patient's identity is verified by more than one method as the individual named in the written directive;

(c) That final plans of treatment and related calculations for brachytherapy, teletherapy, and gamma stereotactic radiosurgery are in accordance with the respective written directives;

(d) That each administration is in accordance with the written directive; and

(e) That any unintended deviation from the written directive is identified and evaluated, and appropriate action is taken.

(2) The licensee shall:

(a) Develop procedures for and conduct a review of the therapy administration program including, since the last review, an evaluation of:

(i) A representative sample of patient and human research subject administrations;

(ii) All recordable events; and

(iii) All therapy misadministrations to verify compliance with all aspects of the therapy administration program; these reviews shall be conducted at intervals no greater than twelve months;

(b) Evaluate each of these reviews to determine the effectiveness of the therapy administration program and, if required, make modifications to meet the objectives of subsection (1) of this section; and

(c) Retain records of each review, including the evaluations and findings of the review, in an auditable form for three years.

(3) The licensee shall evaluate and respond, within thirty days after the discovery of the recordable therapy event, to each recordable therapy event by:

(a) Assembling the relevant facts including the cause;

(b) Identifying what, if any, corrective action is required to prevent recurrence; and

(c) Retaining a record, in an auditable form, for three years, of the relevant facts and what corrective action, if any, was taken.

(2003 Ed.)

(4) The licensee shall retain:

(a) Each written directive (provided, however, that such written directive is not required if the dose is both personally assayed and administered by the authorized user); and

(b) A record of each administered radiation dose where a written directive is required in subsection (1)(a) of this section, in an auditable form for three years after the date of the administration.

(5) The licensee may make modifications to the program to increase the program's efficiency provided the program's effectiveness is not decreased.

[Statutory Authority: RCW 70.98.050, 98-13-037, § 246-240-015, filed 6/8/98, effective 7/9/98; 95-01-108, § 246-240-015, filed 12/21/94, effective 1/21/95.]

WAC 246-240-020 Interstitial, intracavitary and superficial applications. (1) Accountability, storage, and handling.

(a) Except as otherwise specifically authorized by the department, each licensee shall provide accountability of sealed sources and shall keep a record of the issue and return of all sealed sources to their place of storage.

(b) Each licensee shall conduct a quarterly physical inventory to account for all sources and devices received and possessed. Records of the inventories shall be maintained for inspection by the department and shall include the activities, radionuclide(s), and serial numbers of radioactive sources, location of sources and devices, the date of the inventory, and the initials or name of the person performing the inventory.

(c) Each licensee shall follow the radiation safety and handling instructions approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and furnished by the manufacturer on the label attached to the source, device or permanent container thereof, or in the leaflet or brochure which accompanies the source or device, and maintain such instruction in a legible and conveniently available form.

(d) Each licensee shall assure that sealed therapy sources are not opened/breached, or physically modified while in the licensee's possession unless specifically authorized by license condition.

(2) Testing sealed sources for leakage and contamination.

(a) All sealed sources containing more than 100 microcuries (3.7 megabecquerels) of radioactive material with a half-life greater than thirty days, except Iridium-192 seeds encased in nylon ribbon, shall be tested for contamination and/or leakage at intervals not to exceed six months or at such other intervals as are approved by the department, the United States Nuclear Regulatory Commission, an agreement state or a licensing state and described by the manufacturer on the label attached to the source, device, or permanent container thereof, or in the leaflet or brochure which accompanies the source or device. Each source or device shall be so tested prior to its first use unless the supplier furnishes a certificate that the source or device has been so tested within six months prior to the transfer.

(b) Leak tests shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample or in the case of radium, the escape of

[Title 246 WAC—p. 379]

radon at the rate of 0.001 microcurie (37 becquerels) per twenty-four hours. The test sample shall be taken from the source or from the surfaces of the device in which the source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries or becquerels and maintained for inspection by the department.

(c) Any leak test conducted pursuant to (a) of this subsection which reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination or in the case of radium, the escape of radon at the rate of 0.001 microcurie (37 becquerels) per twenty-four hours, shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the source from use and cause it to be decontaminated and repaired or to be disposed of in accordance with department regulations. A report shall be filed within five days of the test with the department, describing the equipment involved, the test results, and the corrective action taken.

(3) Radiation surveys.

(a) The maximum exposure rate radiation level at a distance of one meter from the patient in whom brachytherapy sources have been inserted shall be determined by measurement or calculation. This radiation level shall be entered on the patient's chart and other signs as required under subsection (4) of this section.

(b) The exposure rate radiation levels in the patient's room and the surrounding area shall be determined, recorded, and maintained for inspection by the department.

(c) The licensee shall assure that patients treated with Cobalt-60, Cesium-137, Iridium-192, Radium-226, or any other nonpermanent implants, including High Dose Rate (HDR), Medium Dose Rate (MDR), or Low Dose Rate (LDR) therapy systems used on an in-patient or out-patient basis, remain hospitalized until a source count and a radiation survey of the patient and the patient's room confirm that all implants have been removed and are accounted for immediately after removing the last source.

(4) Signs and records.

(a) In addition to the requirements of WAC 246-221-120, the bed, cubicle, or room of the hospital brachytherapy patient shall be marked with a sign indicating the presence of brachytherapy sources. This sign shall incorporate the radiation symbol and specify the radionuclide, the activity, date, and the individual(s) to contact for radiation safety instructions.

(b) The following information shall be included for the duration of the patient's treatment in the patient's official hospital medical record/chart:

(i) The radionuclide administered, number of sources, activity in millicuries or becquerels and time and date of administration;

(ii) The exposure rate at one meter, the time the determination was made, and by whom;

(iii) The radiation symbol; and

(iv) The precautionary instructions necessary to assure that the exposure of individuals does not exceed that permitted under WAC 246-221-010.

(c) Information required by subsection (4)(b)(i) and (ii) of this section shall be retained for review by the department.

(d) A record of the survey conducted to confirm that all sources have been removed from a patient or human research subject prior to release shall be retained for three years. Each record shall include the date of the survey, the name of the patient or human research subject, the dose rate from the patient or human research subject expressed as millirem per hour and measured at one meter from the patient or human research subject, the survey instrument used, and the initials of the individual who made the survey.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-240-020, filed 6/8/98, effective 7/9/98; 94-06-017, § 246-240-020, filed 2/22/94, effective 3/25/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-240-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-240-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-32-020, filed 12/11/86; 83-19-050 (Order 2026), § 402-32-020, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-32-020, filed 12/8/80; Order 1084, § 402-32-020, filed 1/14/76; Order 1, § 402-32-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-240-025 Release of individuals containing permanent implants. (1) The licensee may authorize the release from its control of any individual who has permanent implants containing radioactive material if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 millisieverts (0.5 rem).

(2) The licensee shall provide the released individual with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 millisievert (0.1 rem).

(3) The licensee shall maintain a record of the basis for authorizing the release of an individual, for three years after the date of release, if the total effective dose equivalent is calculated by:

- (a) Using an occupancy factor less than 0.25 at 1 meter;
- or
- (b) Considering the shielding by tissue.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-240-025, filed 6/8/98, effective 7/9/98.]

WAC 246-240-030 Teletherapy. (1) Equipment.

(a) The housing shall be so constructed that, at one meter from the source, the maximum exposure rate does not exceed ten milliroentgens per hour when the beam control mechanism is in the "off" position. The average exposure rate measured at a representative number of points about the housing, each one meter from the source, shall not exceed two milliroentgens per hour.

(b) For teletherapy equipment installed after the effective date of these regulations, the leakage radiation measured at one meter from the source when the beam control mechanism is in the "on" position shall not exceed 0.1 percent of the useful beam exposure rate.

(c) Adjustable or removable beam-defining diaphragms shall allow transmission of not more than five percent of the useful beam exposure rate.

(d) The beam control mechanism shall be of a positive design capable of acting in any orientation of the housing for which it is designed to be used. In addition to an automatic closing device, the mechanism shall be designed so that it can be manually returned to the "off" position with a minimum risk of exposure.

(e) The closing device shall be so designed as to return automatically to the "off" position in the event of any breakdown or interruption of the activating force and shall stay in the "off" position until activated from the control panel.

(f) Beam control mechanisms.

(i) When any door to the treatment room is opened, the beam control mechanism shall automatically and rapidly restore the unit to the "off" position and cause it to remain there until the unit is reactivated from the control panel.

(ii) Beam control mechanisms shall be tested at intervals not to exceed three months for proper function. Records of these tests shall be maintained for inspection by the department.

(g) There shall be at the housing and at the control panel a warning device that plainly indicates whether the beam is on or off.

(h) The equipment shall be provided with a locking device to prevent unauthorized use.

(i) The control panel shall be provided with a timer that automatically terminates the exposure after a preset time.

(j) Provision shall be made to permit continuous observation of patients during irradiation.

(k) The treatment room shall be equipped with a permanent radiation monitor which shall:

(i) Continuously monitor the condition of the teletherapy beam;

(ii) Provide a continuous visible signal to the teletherapy unit operator and any person entering the treatment room, of a unit malfunction;

(iii) Each radiation monitor must be equipped with an emergency power supply separate from the power supply to the teletherapy unit. This emergency power supply may be a battery system;

(iv) Each radiation monitor must be tested for proper operation each day before the teletherapy unit is used for treatment of patients; and

(v) If a radiation monitor is inoperable for any reason, any person entering the teletherapy room shall use a properly operating portable survey instrument or audible alarm personal dosimeter to monitor for any malfunction of the source exposure mechanism that may have resulted in an exposed or partially exposed source. Survey instruments or dosimeters must be tested daily before use.

(2) **Operation.** Except in the emergency condition when a source fails to retract, no individual shall be in the treatment room during irradiation unless that individual is the patient. Mechanical restraining or supporting devices shall be used for positioning the patient, if necessary.

(3) **Testing for leakage and contamination.** Teletherapy sources shall be tested for leakage and contamination in accordance with the procedures described in WAC 246-240-

020(2). Tests of leakage may be made by wiping accessible surfaces of the housing port or collimator while the source is in the "off" position and measuring these wipes for transferred contamination.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-240-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-240-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-32-030, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-32-030, filed 12/8/80; Order 1084, § 402-32-030, filed 1/14/76; Order 1, § 402-32-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-240-040 Special requirements for teletherapy licensees. (1) Requirement to perform full calibration requirements of teletherapy units.

(a) Any licensee authorized under WAC 246-235-080 to use teletherapy units for treating humans shall cause full calibration measurements to be performed on each teletherapy unit:

(i) Prior to the first use of the unit for treating humans:

(A) Whenever spot-check measurements indicate that the output value differs by more than five percent from the value obtained at the last full calibration corrected mathematically for physical decay;

(B) Following replacement of the radiation source or following reinstallation of the teletherapy unit in a new location;

(C) Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and

(D) At intervals not exceeding one year.

(b) Full calibration measurements required by (a) of this subsection shall include determination of:

(i) The exposure rate or dose rate to an accuracy within ± 3 percent for the range of field sizes and for the range of distances (or for the axis distance) used in radiation therapy;

(ii) The congruence between the radiation field and the field indicated by the light beam localizing device;

(iii) The uniformity of the radiation field and its dependence upon the orientation of the useful beam;

(iv) Timer accuracy; and

(v) The accuracy of all distance measuring devices used for treating humans.

(c) Full calibration measurements shall be made in accordance with the procedures recommended by the Scientific Committee on Radiation Dosimetry of the American Association of Physicists in Medicine (Physics in Medicine and Biology, Vol. 16, No. 3, 1971, pp. 379-386).¹

(d) The exposure rate or dose rate values determined in (b)(i) of this subsection shall be corrected mathematically for physical decay for intervals not exceeding one month for units employing a Cobalt-60 source and six months for units employing a Cesium-137 source.

(e) Full calibration measurements required by (a) of this subsection and physical decay corrections required by (d) of this subsection shall be performed by an expert qualified by training and experience in accordance with subsection (4) of this section.

(2) Requirement to perform periodic spot-check measurements of teletherapy units.

(a) Any licensee authorized under WAC 246-235-080(4) to use teletherapy units for treating humans shall cause spot-check measurements to be performed on each teletherapy unit at intervals not exceeding one month.

(b) Spot-check measurements required by (a) of this subsection shall include determination of:

(i) Timer accuracy;

(ii) The congruence between the radiation field and the field indicated by the light beam localizing device;

(iii) The accuracy of all distance measuring devices used for treating humans;

(iv) The exposure rate, dose rate, or a quantity related in a known manner to these rates for one typical set of operating conditions; and

(v) The difference between the measurement made in (b) of this subsection and the anticipated output, expressed as a percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay).

(c) Spot-check measurements required by (a) of this subsection shall be performed in accordance with procedures established by an expert qualified by training and experience in accordance with subsection (4) of this section. (A qualified expert need not actually perform the spot-check measurements.) If a qualified expert does not perform the spot-check measurements, the results of the spot-check measurements shall be reviewed by a qualified expert within fifteen days.

(3) Requirement to calibrate instruments used for full calibration and spot-check measurements.

(a) Full calibration measurements required by subsection (1) of this section shall be performed using a dosimetry system that has been calibrated by the National Bureau of Standards or by a Regional Calibration Laboratory accredited by the American Association of Physicists in Medicine. The dosimetry system shall have been calibrated within the previous two years and after any servicing that may have affected system calibration.

(b) Spot-check measurements required by subsection (2) of this section shall be performed using a dosimetry system that has been calibrated in accordance with (a) of this subsection. Alternatively, a dosimetry system used solely for spot-check measurements may be calibrated by direct intercomparison with a system that has been calibrated in accordance with (a) of this subsection. This alternative calibration method shall have been performed within the previous one year and after each servicing that may have affected system calibration. Dosimetry systems calibrated by this alternative method shall not be used for full calibration measurements. The use of thermoluminescent dosimeter does not satisfy the requirements of this section.

(4) **Qualified expert.** The licensee shall determine if a person is an expert qualified by training and experience to calibrate a teletherapy unit and establish procedures for (and review the results of) spot-check measurements. The licensee shall determine that the qualified expert:

(a) Is certified by the American Board of Radiology in Therapeutic Radiological Physics, Radiological Physics, Roentgen-Ray and Osmin-Ray Physics, or X-ray and Radium Physics; or

(b) Has the following minimum training and experience:

(i) A master's or doctor's degree in physics, biophysics, radiological physics or health physics;

(ii) One year of full-time training in therapeutic radiological physics; and

(iii) One year of full-time experience in a radiotherapy facility including personal calibration and spot-check of at least one teletherapy unit.

Note: The requirements of subsection (4) of this section are in addition to those set forth under "Qualified expert" in WAC 246-220-010.

(5) Records.

The licensee shall maintain, for inspection by the department, records of the measurements, tests, corrective actions, and instrument calibrations made under subsections (1) and (2) of this section and records of the licensee's evaluation of the qualified expert's training and experience made under subsection (4) of this section.

(a) Records of (i) full calibration measurements and (ii) calibration of instruments used to make these measurements shall be preserved for five years after completion of the full calibration.

(b) Records of (i) spot-check measurements and corrective actions and (ii) calibration of instruments used to make spot-check measurements shall be preserved for two years after completion of the spot-check measurements and corrective actions.

(c) Records of the licensee's evaluation of the qualified expert's training and experience shall be preserved for five years after the qualified expert's last performance of a full calibration of the licensee's teletherapy unit.

(6) Inspection and servicing of the source exposure mechanism.

(a) Each teletherapy machine shall be fully inspected and serviced during source replacement or at intervals not to exceed five years, whichever comes first, to assure proper function of the source exposure mechanism. This inspection and servicing must be performed by persons specifically authorized to do so by the department, the United States Nuclear Regulatory Commission, or an agreement state, and a complete written report of the inspection and servicing must be kept on file for review by the department.

(b) The following shall be performed only by persons specifically authorized by the department, the United States Nuclear Regulatory Commission, or an agreement state to perform such services:

(i) Installation, inspection, servicing, relocation, or removal of teletherapy units containing sources.

(ii) Source exchange.

(iii) Any maintenance or repair operations on a teletherapy unit involving work on the source drawer, the shutter, or other mechanism that could expose the source, reduce the shielding around the source or compromise the safety of the unit and result in increased radiation levels.

¹ Licensees that have their teletherapy units calibrated by persons who do not meet these criteria for minimum training and experience may require a license amendment excepting them from the requirements of subsection (4) of this section. The request should include the name of the proposed qualified expert, a description of his or her training and experience including information similar to that specified by subsection (4) of this section and a report of at least one calibration and spot-check program based on mea-

surements personally made by the proposed expert within the last ten years and written endorsement of the technical qualifications of the proposed expert from personal knowledge by a physicist certified by the American Board of Radiology in one of the specialties listed therein.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-240-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-240-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-32-100, filed 12/11/86; 83-19-050 (Order 2026), § 402-32-100, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-32-100, filed 12/8/80.]

WAC 246-240-050 Notifications, records, and reports of therapy misadministrations. (1) The licensee shall notify by telephone the division of radiation protection at (206) 682-5327 no later than the next calendar day after the discovery of a therapy misadministration.

(2) The licensee also shall notify the referring physician and the individual receiving the therapy misadministration (or the individual's responsible relative or guardian) of the therapy misadministration not later than twenty-four hours after its discovery, unless the referring physician personally informs the licensee either that the physician will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or the patient receiving the therapy misadministration cannot be reached within twenty-four hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the therapy misadministration, because of any delay in notification.

(3) The licensee shall submit a written report to the department within fifteen days after discovery of the therapy misadministration. The written report must include the licensee's name; the prescribing physician's name; a brief description of the therapy misadministration; why it occurred; the effect on the individual; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the licensee notified the individual, and if not, why not, and if there was notification, what information was provided. The report shall not include the individual's name or other information that could lead to identification of the individual. To meet the requirements of this section, the notification of the individual receiving the therapy misadministration may be made instead to that individual's responsible relative or guardian, when appropriate.

(4) If the individual was notified, the licensee shall also furnish, within fifteen days after discovery of the therapy misadministration, a written report to the individual by sending either:

(a) A copy of the report that was submitted to the department; or

(b) A brief description of both the therapy misadministration and the consequences, as they may affect the individual, and a statement informing the individual that the report submitted to the department can be obtained from the licensee.

(5) Each licensee shall retain a record of each therapy misadministration for five years. The record must contain the

names of all individuals involved (including the prescribing physician, allied health personnel, the individual who received the therapy misadministration, and that individual's referring physician), the individual's Social Security number or identification number if one has been assigned, a brief description of the therapy misadministration, why it occurred, the effect on the individual, improvements needed to prevent recurrence, and the actions taken to prevent recurrence.

(6) Aside from the notification requirement, nothing in this section affects any rights or duties of licensees and physicians in relation to each other, to individual's receiving therapy misadministrations, or to that individual's responsible relatives or guardians.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-240-050, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-240-050, filed 2/21/92, effective 3/23/92.]

Chapter 246-243 WAC

RADIATION PROTECTION—INDUSTRIAL RADIOGRAPHY

WAC

246-243-001	Purpose.
246-243-010	Scope.
246-243-020	Definitions.
246-243-030	Conducting industrial radiography operations.
246-243-040	Equipment performance requirements.
246-243-042	Labeling, storage, and transportation.
246-243-044	Records of receipt and transfer of sealed sources.
246-243-047	Radiation safety officer for industrial radiography.
246-243-050	Internal inspection program and training.
246-243-060	Locking of radiographic exposure devices.
246-243-070	Storage precautions.
246-243-080	Radiation survey instruments.
246-243-090	Leak testing, repair, tagging, opening, modification, and replacement of sealed sources.
246-243-100	Quarterly inventory.
246-243-110	Utilization logs.
246-243-120	Inspection and maintenance of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments.
246-243-130	Limitations—Personal radiation safety requirements for radiographers and radiographers' assistants.
246-243-140	Operating and emergency procedures.
246-243-141	Copies of operating and emergency procedures.
246-243-150	Personnel monitoring control.
246-243-160	Supervision of radiographers' assistants.
246-243-170	Security—Precautionary procedures in radiographic operations.
246-243-180	Posting.
246-243-190	Radiation surveys and survey records.
246-243-195	Reporting.
246-243-200	Records required at temporary job sites.
246-243-203	Form of records.
246-243-205	Temporary job site notification.
246-243-220	Special requirements for permanent radiographic installation.
246-243-230	Appendix A—Minimum subjects to be covered in training radiographers.
246-243-240	Appendix B—General guidelines for inspection of radiography equipment.
246-243-250	Appendix C—Radiographer certification.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-243-210	Special requirements for enclosed radiography. [Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-210, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-210, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order
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121), recodified as § 246-243-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-155, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-155, filed 12/8/80; Order 1084, § 402-36-155, filed 1/14/76.] Repealed by 00-08-013, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050.

WAC 246-243-001 Purpose. The regulations in this chapter establish radiation safety requirements for persons utilizing sources of radiation for industrial radiography. The requirements of this part are in addition to and not in substitution for the other requirements of these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-001, filed 12/27/90, effective 1/31/91; Order 1084, § 402-36-010, filed 1/14/76; Order 1, § 402-36-010, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-010 Scope. The regulations in this chapter apply to all licensees who use sources of radiation for industrial radiography: Provided, however, That nothing in this part shall apply to the use of sources of radiation in the healing arts.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-010, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-010, filed 12/27/90, effective 1/31/91; Order 1084, § 402-36-020, filed 1/14/76; Order 1, § 402-36-020, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-020 Definitions. As used in this part:

(1) "Annual refresher safety training" means a review conducted or provided by the licensee for its employees on radiation safety aspects of industrial radiography. The review may include, as appropriate, the results of internal inspections, new procedures or equipment, new or revised regulations, accidents or errors that have been observed, and should also provide opportunities for employees to ask safety questions.

(2) "Associated equipment" means equipment that is used in conjunction with a radiographic exposure device to make radiographic exposures that drives, guides, or comes in contact with the source, (e.g., guide tube, control tube, control (drive) cable, removable source stop, "J" tube and collimator) when it is used as an exposure head.

(3) "Certifying entity" means an independent certifying organization meeting the requirements in WAC 246-243-250 Appendix C or an agreement state meeting the requirements in WAC 246-243-250 Appendix C, subsections (2) and (3).

(4) "Collimator" means a radiation shield that is placed on the end of the guide tube or directly onto a radiographic exposure device to restrict the size of the radiation beam when the sealed source is cranked into position to make a radiographic exposure.

(5) "Control (drive) cable" means the cable that is connected to the source assembly and used to drive the source to and from the exposure location.

(6) "Control drive mechanism" means a device that enables the source assembly to be moved to and from the exposure device.

(7) "Control tube" means a protective sheath for guiding the control cable. The control tube connects the control drive mechanism to the radiographic exposure device.

(8) "Exposure head" means a device that locates the gamma radiography sealed source in the selected working position. (An exposure head is also known as a source stop.)

(9) "Field station" means a facility where licensed material may be stored or used and from which equipment is dispatched.

(10) "Guide tube (projection sheath)" means a flexible or rigid tube (i.e., "J" tube) for guiding the source assembly and the attached control cable from the exposure device to the exposure head. The guide tube may also include the connections necessary for attachment to the exposure device and to the exposure head.

(11) "Hands-on experience" means experience in all of those areas considered to be directly involved in the radiography process.

(12) "Independent certifying organization" means an independent organization that meets all of the criteria of WAC 246-243-250 Appendix C.

(13) "Industrial radiography" (radiography) means the examination of the macroscopic structure of materials by nondestructive methods utilizing sources of radiation to make radiographic images. Industrial radiography as used in this chapter does not include well logging operations.

(14) "Lay-barge radiography" means industrial radiography performed on any water vessel used for laying pipe.

(15) "Offshore platform radiography" means industrial radiography conducted from a platform over a body of water.

(16) "Permanent radiographic installation" means an enclosed shielded room, cell or vault, not located at a temporary job site, in which radiography is performed, regardless of ownership.

(17) "Practical examination" means a demonstration through practical application of the safety rules and principles in industrial radiography including use of all appropriate equipment and procedures.

(18) "Radiation safety officer for industrial radiography" means an individual with the responsibility for the overall radiation safety program on behalf of the licensee and who meets the requirements of WAC 246-243-047.

(19) "Radiographer" means any individual who performs or who, in attendance at the site where sources of radiation are being used, personally supervises industrial radiographic operations and who is responsible to the licensee for assuring compliance with the requirements of these regulations and all license conditions.

(20) "Radiographer certification" means written approval received from a certifying entity stating that an individual has satisfactorily met certain established radiation safety, testing, and experience criteria.

(21) "Radiographer's assistant" means any individual who, under the personal supervision of a radiographer, uses sources of radiation, related handling tools, or radiation survey instruments in industrial radiography.

(22) "Radiographic exposure device" means any instrument containing a sealed source fastened or contained therein, in which the sealed source or shielding thereof may be moved, or otherwise changed, from a shielded to unshielded position for purposes of making a radiographic exposure.

(23) "Radiographic operations" means all activities associated with the presence of radioactive sources in a radiographic exposure device during use of the device or transport (except when being transported by a common or contract carrier), to include surveys to confirm the adequacy of boundaries, setting up equipment and any activity inside restricted area boundaries.

(24) "S-tube" means a tube through which the radioactive source travels when inside a radiographic exposure device.

(25) "Shielded position" means the location within the radiographic exposure device or source changer where the sealed source is secured and restricted from movement.

(26) "Source assembly" means an assembly that consists of the sealed source and a connector that attaches the source to the control cable. The source assembly may also include a stop ball used to secure the source in the shielded position.

(27) "Source changer" means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those also used for transporting and storage of sealed sources.

(28) "Storage area" means any location, facility, or vehicle which is used to store or to secure a radiographic exposure device, a storage container, or a sealed source when it is not in use and which is locked or has a physical barrier to prevent accidental exposure, tampering with, or unauthorized removal of the device, container, or source.

(29) "Storage container" means a container in which sealed sources are secured and stored.

(30) "Temporary job site" means a location where radiographic operations are conducted and where licensed material may be stored other than those location(s) of use authorized on the license.

(31) "Underwater radiography" means industrial radiography performed when the radiographic exposure device and/or related equipment are beneath the surface of the water.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-020, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-020, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-020, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-025, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-025, filed 12/8/80; Order 1084, § 402-36-025, filed 1/14/76.]

WAC 246-243-030 Conducting industrial radiography operations. (1) Whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of WAC 246-243-130(2) (radiographer's assistant). The additional qualified individual shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Radiography may not be performed if only one qualified individual is present.

(2) All radiographic operations conducted at locations of use authorized on the license must be conducted in a permanent radiographic installation, unless specifically authorized by the department.

(2003 Ed.)

(3) Offshore platform, lay-barge, and/or underwater radiography shall be performed only by licensees whose license specifically authorizes such activity. Such operations fall under the jurisdiction of the United States Nuclear Regulatory Commission when conducted outside of the territorial waters of the state of Washington.

(4) Licensees will have until January 1, 2001, to meet the requirement for having two qualified individuals present at locations other than a permanent radiographic installation as specified in subsection (1) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-030, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-027, filed 9/16/83.]

WAC 246-243-040 Equipment performance requirements. Equipment used in industrial radiography operations must meet the following minimum criteria:

(1)(a) Each radiographic exposure device, source assembly or sealed source, and all associated equipment must meet the requirements specified in American National Standards Institute, N432-1980 *"Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography,"* (published as NBS Handbook 136, issued January 1981). Copies of the document are available for inspection at the Department of Health, Division of Radiation Protection, Olympia, Washington.

(b) Engineering analysis may be submitted by an applicant or licensee to demonstrate the applicability of previously performed testing on similar individual radiography equipment components. Upon review, the department may find this an acceptable alternative to actual testing of the component pursuant to the above referenced standard.

(c) Notwithstanding (a) of this subsection, equipment used in industrial radiographic operations need not comply with § 8.9.2(c) of the Endurance Test in American National Standards Institute N432-1980, if the prototype equipment has been tested using a torque value representative of the torque that an individual using the radiography equipment can realistically exert on the lever or crankshaft of the drive mechanism.

(2) In addition to the requirements specified in subsection (1) of this section, the following requirements apply to radiographic exposure devices, source changers, source assemblies and sealed sources.

(a) The licensee shall ensure that each radiographic exposure device has attached to it a durable, legible, clearly visible label bearing the:

(i) Chemical symbol and mass number of the radionuclide in the device;

(ii) Activity and the date on which this activity was last measured;

(iii) Model (or product code) and serial number of the sealed source;

(iv) Manufacturer's identity of the sealed source; and

(v) Licensee's name, address, and telephone number.

(b) Radiographic exposure devices intended for use as Type B transport containers must meet the applicable requirements of 10 CFR Part 71.

(c) Modification of radiographic exposure devices, source changers, and source assemblies and associated equipment is prohibited, unless the design of any replacement component, including source holder, source assembly, controls or guide tubes would not compromise the design safety features of the system.

(3) In addition to the requirements specified in subsections (1) and (2) of this section, the following requirements apply to radiographic exposure devices, source assemblies, and associated equipment that allow the source to be moved out of the device for radiographic operations or to source changers.

(a) The coupling between the source assembly and the control cable must be designed in such a manner that the source assembly will not become disconnected if cranked outside the guide tube. The coupling must be such that it can not be unintentionally disconnected under normal and reasonably foreseeable abnormal conditions.

(b) The device must automatically secure the source assembly when it is cranked back into the fully shielded position within the device. The securing system may only be released by means of a deliberate operation on the exposure device.

(c) The outlet fittings, lock box, and drive cable fitting on each radiographic exposure device must be equipped with safety plugs or covers which must be installed during storage and transportation to protect the source assembly from water, mud, sand, or other foreign matter.

(d)(i) Each sealed source or source assembly must have attached to it or engraved on it, a durable, legible, visible label with the words: "DANGER—RADIOACTIVE."

(ii) The label may not interfere with the safe operation of the exposure device or associated equipment.

(e) The guide tube must be able to withstand a crushing test that closely approximates the crushing forces that are likely to be encountered during use, and be able to withstand a kinking resistance test that closely approximates the kinking forces likely to be encountered during use.

(f) Guide tubes must be used when moving the source out of the device.

(g) An exposure head or similar device designed to prevent the source assembly from passing out of the end of the guide tube must be attached to the outermost end of the guide tube during radiographic operations.

(h) The guide tube exposure head connection must be able to withstand the tensile test for control units specified in ANSI N432-1980.

(i) Source changers must provide a system for ensuring that the source will not be accidentally withdrawn from the changer when connecting or disconnecting the drive cable to or from a source assembly.

(4) All radiographic exposure devices and associated equipment in use after January 1, 1998, must comply with the requirements of this section.

(5) The maximum exposure rate limits for storage containers and source changers with the sealed source in the shielded position are:

(a) 2 millisieverts (200 millirem) per hour at any exterior surface; and

(b) 0.1 millisieverts (10 millirem) per hour at one meter from any exterior surface.

[Statutory Authority: RCW 70.98.050. 99-05-012, § 246-243-040, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-243-040, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-030, filed 12/8/80; Order 1084, § 402-36-030, filed 1/14/76; Order 1, § 402-36-030, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-042 Labeling, storage, and transportation. (1) The licensee may not use a source changer or a container to store licensed material unless the source changer or the storage container has securely attached to it a durable, legible, and clearly visible label bearing the standard trefoil radiation caution symbol in conventional colors, i.e., magenta, purple or black on a yellow background, having a minimum diameter of 25 mm, and the wording:

CAUTION (or "DANGER")
RADIOACTIVE MATERIAL
NOTIFY CIVIL AUTHORITIES
(or "NAME OF COMPANY")

(2) The licensee may not transport licensed material unless the material is packaged, and the package is labeled, marked, and accompanied with appropriate shipping papers in accordance with regulations set out in 10 CFR Part 71.

(3) Locked radiographic exposure devices and storage containers must be physically secured to prevent tampering or removal by unauthorized personnel. The licensee shall store licensed material in a manner which will minimize danger from explosion or fire.

(4) The licensee shall lock and physically secure the transport package containing licensed material in the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-042, filed 3/24/00, effective 4/24/00.]

WAC 246-243-044 Records of receipt and transfer of sealed sources. (1) Each licensee shall maintain records showing the receipts and transfers of sealed sources and of devices using depleted uranium (DU) for shielding and retain each record for three years after it is made.

(2) These records must include the date, shipper or destination, the name of the individual making the record, radio-nuclide, number of becquerels (curies) or mass (for DU), and manufacturer, model, and serial number of each sealed source and/or device, as appropriate.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-044, filed 3/24/00, effective 4/24/00.]

WAC 246-243-047 Radiation safety officer for industrial radiography. The radiation safety officer (RSO) shall ensure that radiation safety activities are being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensee's program.

(1) The minimum qualifications, training, and experience for RSOs for industrial radiography are as follows:

(a) Completion of the training and testing requirements of WAC 246-243-130(1);

(b) Two thousand hours of hands-on experience as a qualified radiographer in industrial radiographic operations utilizing sealed radioactive material; and

(c) Formal training in the establishment and maintenance of a radiation protection program.

(2) The department will consider alternatives when the RSO has appropriate training and/or experience in the field of ionizing radiation, and in addition, has adequate formal training with respect to the establishment and maintenance of a radiation safety protection program.

(3) The specific duties and authorities of the RSO include, but are not limited to:

(a) Establishing and overseeing all operating, emergency, and ALARA procedures as required by chapter 246-221 WAC, and reviewing them regularly to ensure that the procedures in use conform to current chapter 246-221 WAC requirements, conform to other department regulations and to the license conditions;

(b) Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;

(c) Ensuring that required radiation surveys and leak tests are performed and documented in accordance with the regulations, including any corrective measures when levels of radiation exceed established limits;

(d) Ensuring that personnel monitoring devices are calibrated and used properly by occupationally exposed personnel, that records are kept of the monitoring results, and that timely notifications are made as required by WAC 246-221-260; and

(e) Ensuring that operations are conducted safely and to assume control for instituting corrective actions including stopping of operations when necessary.

(4) The licensee will have until January 1, 2001, to meet the requirements of subsection (1) or (2) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-047, filed 3/24/00, effective 4/24/00.]

WAC 246-243-050 Internal inspection program and training. (1) Each licensee shall conduct the internal inspection of job performance required by WAC 246-235-084 at intervals not to exceed six months. Except as provided in subsection (1)(d) of this section, the radiation safety officer (RSO) or designee shall conduct an inspection program of the job performance of each radiographer and radiographer's assistant to ensure that the department's regulations, license requirements, and the licensee's operating and emergency procedures are followed. The inspection program shall:

(a) Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals not to exceed six months; and

(b) Provide that, if a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than six months since the last inspection, the radiographer must demonstrate knowledge of the training requirements of WAC 246-243-130 (1)(c) and the radiographer's assistant must redemonstrate knowledge of the training

(2003 Ed.)

requirements of WAC 246-243-130 (2)(b) by a practical examination before these individuals can next participate in a radiographic operation.

(c) The department may consider alternatives in situations where the individual serves as both radiographer and RSO.

(d) In operations where a single individual serves as both radiographer and RSO, and performs all radiography operations, an inspection program is not required.

(2) The licensee shall provide annual refresher safety training for each radiographer and radiographer's assistant at intervals not to exceed twelve months.

(3) Each licensee shall maintain the following records for three years after the record is made:

(a) For semi-annual inspection of job performance, the record shall include:

(i) A list of the items checked; and

(ii) Any noncompliances observed by the RSO;

(b) For annual refresher safety training, the record shall include:

(i) A list of the topics discussed;

(ii) The dates the training was conducted; and

(iii) Names of the instructors and attendees.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-050, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-243-050, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-035, filed 9/16/83.]

WAC 246-243-060 Locking of radiographic exposure devices. (1) Each radiographic exposure device shall be provided with a lock or outerlocked container designed to prevent unauthorized or accidental production of radiation or removal or exposure of a sealed source and shall be locked when returned to the shielded position at all times. If it is a keyed-lock, the key shall be removed at all times when not under the direct surveillance of a radiographer or a radiographer's assistant except at permanent radiographic installations as stated in WAC 246-243-170. In addition, during radiographic operations the sealed source assembly shall be locked in the shielded position each time the source is returned to that position.

(2) Each sealed source storage container and source changer shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. Storage containers and source changers shall be kept locked (and if a keyed-lock, with the key removed at all times) when containing sealed sources except when under the direct surveillance of a radiographer or a radiographer's assistant.

(3) Radiographic exposure devices, source changers, and storage containers, prior to being moved from one location to another and also prior to being secured at a given location, shall be locked and surveyed to assure that the sealed source is in the shielded position.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-060, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121),

recodified as § 246-243-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-040, filed 12/8/80; Order 1084, § 402-36-040, filed 1/14/76; Order 1, § 402-36-040, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-070 Storage precautions. (1) Locked radiographic exposure devices and storage containers shall be physically secured to prevent tampering or removal by unauthorized personnel.

(2) At least one calibrated and operable radiation survey instrument shall be available at the storage area whenever a radiographic exposure device, a storage container, or source is being placed in storage.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-070, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-050, filed 12/8/80; Order 1084, § 402-36-050, filed 1/14/76; Order 1, § 402-36-050, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-080 Radiation survey instruments. (1) The licensee shall maintain sufficient calibrated and operable radiation survey instruments at each location where radioactive material is present to make physical radiation surveys as required by this part and chapter 246-221 WAC. Instrumentation required by this section shall be capable of measuring a range from 0.02 millisieverts (2 millirems) per hour through 0.01 sievert (1 rem) per hour.

(2) Each radiation survey instrument shall be calibrated:

(a) At intervals not to exceed six months and after each instrument servicing except for battery changes;

(b) Such that accuracy within ± 20 percent of the calibration source can be demonstrated at each point checked; and

(c) For linear scale instruments, at two points located approximately one-third and two-thirds of full scale on each scale; for logarithmic scale instruments, at mid-range of each decade; and for digital instruments at three points between 0.02 and 10 millisieverts (2 and 1000 millirems) per hour.

(3) Records shall be maintained of these calibrations for three years after the calibration date for inspection by the department.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-080, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-080, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-060, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-060, filed 12/8/80; Order 1084, § 402-36-060, filed 1/14/76; Order 1, § 402-36-060, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-090 Leak testing, repair, tagging, opening, modification, and replacement of sealed sources.

(1) The replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing, repair, tagging, opening, or any other modification of any sealed source shall be performed only by persons specifically authorized to do so by the department, the United States Nuclear Regulatory Commission, or any agreement state.

(2) Each sealed source shall be tested for leakage at intervals not to exceed six months. Sealed sources that are in stor-

age and not in use do not require leak testing, but must be tested before use or transfer to another person if the interval of storage exceeds six months. In the absence of a certificate from a transferor that a test has been made within the six-month period prior to the transfer, the sealed source shall not be put into use until tested and results obtained.

(3) The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcurie) of removable contamination on the sealed source. An acceptable leak test for sealed sources in the possession of a radiography licensee would be to test at the nearest accessible point to the sealed source storage position, or other appropriate measuring point where contamination might accumulate, by a procedure specifically approved in a license condition. Records of leak test results shall be kept in units of becquerels (microcuries) and maintained for inspection by the department for three years after the leak test is performed.

(4) Any test conducted under subsections (2) and (3) of this section which reveals the presence of 185 becquerels (0.005 microcurie) or more of removable radioactive material shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the equipment involved from use and shall cause it to be decontaminated and repaired or to be disposed in accordance with regulations of the department. Within five days after obtaining results of the test, the licensee shall file a report with the department describing the involved equipment, the test results, and the corrective action taken.

(5) Each exposure device using depleted uranium (DU) shielding and an "S" tube configuration must be tested for DU contamination at intervals not to exceed twelve months. The analysis must be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample and must be performed by a person specifically authorized by the department, the United States Nuclear Regulatory Commission or an agreement state to perform the analysis. If testing reveals the presence of 185 becquerels (0.005 microcuries) or more of removable DU contamination, the exposure device must be removed from use until an evaluation of the wear on the S-tube has been made. If the evaluation reveals that the S-tube is worn through, the device may not be used again. DU shielded devices do not have to be tested for DU contamination while in storage and not in use. Before using or transferring such a device however, the device must be tested for DU contamination if the interval of storage exceeded twelve months. A record of the DU leak-test results shall be kept in units of becquerels (microcuries) and maintained for inspection by the department for three years after the DU leak test is made or until the source in storage is removed. Licensees will have until January 1, 2001, to comply with the DU leak testing requirements of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-090, filed 3/24/00, effective 4/24/00; 99-05-012, § 246-243-090, filed 2/5/99, effective 3/8/99; 94-01-073, § 246-243-090, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-090, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-36-070, filed 12/11/86; 83-19-050 (Order 2026), § 402-36-070, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-070, filed 12/8/80; Order 1084, § 402-36-070, filed 1/14/76; Order 1, § 402-36-070, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-100 Quarterly inventory. Each licensee shall conduct a quarterly physical inventory to account for all sealed sources and for devices containing depleted uranium (DU) received or possessed. The records of the inventories shall be maintained for three years from the date of inventory for inspection by the department and shall include:

- (1) Exposure device or source changer make, model, and serial number;
- (2) Sealed source serial number and manufacturer;
- (3) Radionuclide and current activity in becquerels (curies) or mass (for DU) in each device;
- (4) Location of sealed source and/or device/changer;
- (5) Date of inventory;
- (6) Name of person who performed inventory.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-100, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-100, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-080, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-080, filed 12/8/80; Order 1084, § 402-36-080, filed 1/14/76; Order 1, § 402-36-080, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-110 Utilization logs. (1) Each licensee shall maintain current logs, which shall be kept available for inspection by the department for three years from the date of the recorded event, at the address specified in the license showing for each sealed source and radiation exposure device the following information:

(a) A description (including the make, model and serial number) of each radiation exposure device or transport or storage container in which the sealed source is located:

(b) The identity and signature of the radiographer to whom assigned; and

(c) Locations where used and dates of use including the dates removed and returned to storage.

(2) A separately identified utilization log is not required if the equivalent information is available in records of the licensee and available at the address specified in the license.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-110, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-110, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-110, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-090, filed 12/8/80; Order 1084, § 402-36-090, filed 1/14/76; Order 1, § 402-36-090, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-120 Inspection and maintenance of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments. (1) The licensee shall perform visual and operability checks on survey meters, radiographic exposure devices, transport and storage containers, associated equipment and source changers before use on each day the equipment is to be used to ensure that the equipment is in good working condition, that the sources are adequately shielded, and that required labeling is present. Survey instrument operability must be performed using check sources or other appropriate means. If equipment problems are found, the equipment must be removed from service until repaired.

(2003 Ed.)

(2) Each licensee shall have written procedures for:

(a) Inspection and routine maintenance of radiographic exposure devices, source changers, associated equipment, transport and storage containers, and survey instruments at intervals not to exceed three months or before the first use thereafter to ensure the proper functioning of components important to safety. Replacement components shall meet design specifications. If equipment problems are found, the equipment must be removed from service until repaired.

(b) Inspection and maintenance necessary to maintain the Type B packaging used to transport radioactive materials. The inspection and maintenance program must include procedures to assure that Type B packages are shipped and maintained in accordance with the certificate of compliance or other approval.

(3) Any maintenance performed on radiographic exposure devices and accessories shall be in accordance with the manufacturer's specifications.

(4) Records of daily checks and quarterly inspections including any equipment problems identified and of any maintenance performed under subsections (1) and (2) of this section shall be made and retained for three years. The record shall include:

(a) The date of check or inspection;

(b) Name of inspector;

(c) Equipment involved;

(d) Any problems found; and

(e) What repair and/or maintenance, if any, was done.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-120, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-120, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-120, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-095, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-095, filed 12/8/80; Order 1084, § 402-36-095, filed 1/14/76.]

WAC 246-243-130 Limitations—Personal radiation safety requirements for radiographers and radiographers' assistants. (1) No licensee shall permit any individual to act as a radiographer as defined in this chapter until such individual:

(a) Has been instructed in the subjects outlined in WAC 246-243-230, in addition to a minimum of two months of on-the-job training, and is certified through a radiographer certification program by a certifying entity in accordance with the criteria specified in WAC 246-243-250, Appendix C or equivalent regulations of the United States Nuclear Regulatory Commission or an agreement state. The department maintains a list of recognized certifying entities for reference. The licensee may, until January 1, 2001, allow an individual who has not met the requirement of this subsection, to act as a radiographer after the individual has received training in the subjects outlined in WAC 246-243-230 and demonstrated an understanding of these subjects by successful completion of a written examination that was previously submitted to and approved by the department;

(b) Has received copies of and instruction in the regulations contained in chapters 246-220, 246-221, 246-222, 246-231, and 246-243 WAC, in the United States Department of

[Title 246 WAC—p. 389]

Transportation regulations as referenced in chapter 246-231 WAC, and the applicable sections of appropriate license(s), and the licensee's operating and emergency procedures, and shall have demonstrated understanding thereof by successful completion of a written or oral examination covering this material;

(c) Has received training in the use of the licensee's radiographic exposure devices, sealed sources, in the daily inspection of devices and associated equipment, and in the use of radiation survey instruments; and

(d) Has demonstrated understanding of the use of radiographic exposure devices, sources, survey instruments and associated equipment described in subsection (1)(c) of this section by successful completion of a practical examination on the subjects covered.

(2) No licensee shall permit any individual to act as a radiographer's assistant as defined in this chapter until such individual:

(a) Has received copies of and instruction in the regulations contained in chapters 246-220, 246-221, 246-222, 246-231, and 246-243 WAC, in the United States Department of Transportation regulations as referenced in chapter 246-231 WAC, and the applicable sections of appropriate license(s), and the licensee's operating and emergency procedures;

(b) Has developed competence to use under the personal supervision of the radiographer the radiographic exposure devices, sealed sources, associated equipment, and radiation survey instruments which will be employed in the individual's assignment; and

(c) Has demonstrated understanding of the instructions provided under (a) of this subsection by successfully completing a written test on the subjects covered and has demonstrated competence in the use of the hardware described in (b) of this subsection by successful completion of a practical examination on the use of such hardware.

(3) Each licensee shall maintain, for inspection by the department, records of training and certification which demonstrate that the requirements of subsections (1) and (2) of this section are met. These records shall be maintained for three years after the record is made. The record shall include:

(a) Radiographer certification documents and verification of certification status;

(b) Copies of written tests;

(c) Dates of oral and practical examinations; and

(d) Names of individuals conducting and receiving the oral and practical examinations.

(4) Licensees will have until January 1, 2001, to comply with the certification requirements specified in subsection (1)(a) of this section, and the additional training requirements specified in subsections (1)(b) and (2)(a) of this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-130, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-130, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-130, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-100, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-100, filed 12/8/80; Order 1084, § 402-36-100, filed 1/14/76; Order 1, § 402-36-100, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-140 Operating and emergency procedures. The licensee's operating and emergency procedures shall include instructions in at least the following:

(1) The handling and use of sources of radiation to be employed such that no individual is likely to be exposed to radiation doses in excess of the limits established in chapter 246-221 WAC Standards for protection against radiation;

(2) Methods and occasions for conducting radiation surveys;

(3) Methods for controlling access to radiographic areas;

(4) Methods and occasions for locking and securing sources of radiation including radiographic exposure devices, transport and storage containers, and sealed sources;

(5) Personnel monitoring and the use of personnel monitoring equipment including steps that must be taken immediately by radiography personnel if a pocket dosimeter is found to be off-scale or an alarm rate meter alarms unexpectedly;

(6) Transportation to field locations, including packing of sources of radiation in the vehicles, placarding of vehicles when needed, and control of sources of radiation during transportation;

(7) Minimizing exposure of individuals in the event of an accident;

(8) Notifying proper personnel in the event of a theft, loss, overexposure or accident involving sources of radiation;

(9) Maintenance of records;

(10) The inspection, maintenance, and operability checks of radiographic exposure devices, survey instruments, transport containers, and storage containers;

(11) Identifying and reporting defects and noncompliance as required by these regulations; and

(12) Source recovery procedures if the licensee will perform source recovery.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-140, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-140, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-110, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-110, filed 12/8/80; Order 1084, § 402-36-110, filed 1/14/76; Order 708, § 402-36-110, filed 8/24/72; Order 1, § 402-36-110, filed 7/2/71; Order 1, § 402-36-110, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-141 Copies of operating and emergency procedures. Each licensee shall maintain a copy of current operating and emergency procedures until the department terminates the license. Superseded material shall be retained for three years after the change is approved.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-141, filed 3/24/00, effective 4/24/00.]

WAC 246-243-150 Personnel monitoring control. (1) No licensee shall permit any individual to act as a radiographer or as a radiographer's assistant unless, at all times during radiographic operations, each such individual shall wear on the trunk of the body a combination of an approved personnel dosimeter such as a film or TLD badge, a direct reading pocket dosimeter, and an alarming rate meter. In permanent facilities where other appropriate alarming or warning

devices are in routine use, the wearing of an alarming rate meter is not required.

(a) Pocket dosimeters shall be capable of measuring exposures from zero to at least 200 milliroentgens. Electronic personal dosimeters may only be used in place of ion-chamber pocket dosimeters.

(b) A film or TLD badge or other approved personnel dosimeter shall be assigned to and worn by only one individual.

(c) Film badges must be replaced at periods not to exceed one month and TLDs must be replaced at periods not to exceed three months.

(d) After replacement, each film badge or TLD must be processed as soon as possible.

(2)(a) Direct reading dosimeters such as pocket dosimeters or electronic personal dosimeters shall be read and exposures recorded at the beginning and end of each shift. Pocket dosimeters shall be charged at the beginning of each shift. Pocket dosimeters shall be checked annually at periods not to exceed twelve months for correct response to radiation. Acceptable dosimeters shall read within plus or minus twenty percent of the true radiation exposure.

(b) Each alarming rate meter must:

(i) Be checked to ensure that the alarm functions properly (sounds) prior to use at the start of each shift;

(ii) Be set to give an alarm signal at a maximum preset rate of 5 mSv/hr. (500 mR/hr.);

(iii) Require special means to change the preset alarm functions; and

(iv) Be calibrated annually at periods not to exceed twelve months for correct response to radiation: Acceptable rate meters must alarm within plus or minus twenty percent of the true radiation exposure rate.

(3) If an individual's pocket dosimeter is found to be off-scale, or if his or her electronic personal dosimeter reads greater than 2 millisieverts (200 millirems), and the possibility of radiation exposure cannot be ruled out as the cause, the individual's film badge or TLD must be sent for processing within twenty-four hours. In addition, the individual may not resume work associated with licensed material use until a determination of the individual's radiation exposure has been made. This determination shall be made by the RSO or the RSO's designee.

(4) If a film badge or TLD is lost or damaged, the worker shall cease work immediately until a replacement film badge or TLD is provided and the exposure is calculated for the time period from issuance to loss or damage of the film badge or TLD.

(5) Each licensee shall maintain the following exposure records:

(a) Direct reading dosimeter readings and yearly operability checks required by subsection (2) of this section for three years after the record is made.

(b) Records of alarm rate meter calibrations for three years after the record is made.

(c) Reports received from the film badge or TLD processor until the department terminates the licensee.

(d) Records of estimates of exposures as a result of: Off-scale personal direct reading dosimeters, or lost or damaged

(2003 Ed.)

film badges or TLDs, until the department terminates the license.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-150, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-150, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-150, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-120, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-120, filed 12/8/80; Order 1084, § 402-36-120, filed 1/14/76; Order 1, § 402-36-120, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-160 Supervision of radiographers' assistants. Whenever a radiographer's assistant uses radiographic exposure devices, uses sealed sources or associated equipment, or conducts radiation surveys required by WAC 246-243-190 to determine that the sealed source has returned to the shielded position after an exposure, he or she shall be under the personal supervision of a radiographer, as defined in WAC 246-243-020. Personal supervision shall include (1) the radiographer's personal presence at the site where the sealed sources are being used, (2) the ability of the radiographer to communicate and give immediate assistance if required, and (3) the radiographer's ability to observe the performance of his/her assistant during the operations referred to in this section.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-160, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-160, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-160, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-125, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-125, filed 12/8/80.]

WAC 246-243-170 Security—Precautionary procedures in radiographic operations. (1) During each radiographic operation, the radiographer or radiographer's assistant shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in chapter 246-220 WAC except:

At permanent radiographic installations where all entryways are locked and the requirements of WAC 246-243-220 are met.

(2) When not in operation or when not under direct surveillance, portable radiation exposure devices shall be physically secured to prevent removal by unauthorized personnel.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-170, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-170, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-170, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-130, filed 12/8/80; Order 1084, § 402-36-130, filed 1/14/76; Order 1, § 402-36-130, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-180 Posting. All areas in which industrial radiography is being performed shall be conspicuously posted as required by WAC 246-221-120. Exceptions listed in WAC 246-221-130 do not apply to industrial radiographic operations.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-180, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-180, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-180, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-140, filed 12/8/80; Order 1084, § 402-36-140, filed 1/14/76; Order 1, § 402-36-140, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-190 Radiation surveys and survey records. The licensee shall:

(1) Conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of WAC 246-243-080.

(2) Using a survey instrument meeting the requirements of subsection (1) of this section, conduct a survey of the radiographic exposure device and the guide tube after each exposure when approaching the device or the guide tube. The survey shall determine that the sealed source has returned to its shielded position before exchanging films, repositioning the exposure head, or dismantling equipment.

(3) Conduct a survey of the radiographic exposure device with a calibrated radiation survey instrument any time the source is exchanged and whenever a radiographic exposure device is placed in a storage area to ensure that the sealed source is in its shielded position.

(4) Conduct a physical radiation survey of the boundary of the restricted area during radiographic operations not employing shielded room radiography. The maximum survey reading at the boundary shall be recorded. The records shall indicate approximate distance from source to boundaries, whether or not the exposed source is collimated and any occupied areas with exposure levels greater than 2 mR in any hour during radiographic operations.

(5) Maintain a record of each exposure device survey conducted before the device is placed in storage if that survey is the last one performed in the workday, and records required by subsection (4) of this section, including the model and serial number of the survey meter used, for inspection by the department for three years after completion of the survey. If the survey was used to determine an individual's exposure, however, the records of the survey shall be maintained until the department authorizes their disposition.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-190, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-190, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 92-06-008 (Order 245), § 246-243-190, filed 2/21/92, effective 3/23/92. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-150, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-150, filed 12/8/80; Order 1084, § 402-36-150, filed 1/14/76; Order 1, § 402-36-150, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-195 Reporting. (1) In addition to the reporting requirements specified in other sections of the regulations, each licensee shall provide a written report to the department within thirty days of the occurrence of any of the following incidents involving radiographic equipment:

(a) Unintentional disconnection of the source assembly from the control cable.

(b) Inability to retract the source assembly to its fully shielded position and secure it in this position.

(c) Failure of any component (critical to safe operation of the device) to properly perform its intended function.

(2) The licensee shall include the following information in each report submitted under subsection (1) of the section.

(a) A description of the equipment problem;

(b) Cause of each incident, if known;

(c) Manufacturer and model number of equipment involved in the incident;

(d) Place, time, and date of incident;

(e) Actions taken to reestablish normal operations;

(f) Corrective actions taken or planned to prevent recurrence;

(g) Qualifications of personnel involved in the incident.

(3) Reports of overexposure submitted under WAC 246-221-260 which involve failure of safety components of radiographic equipment must also include the information specified in subsection (2) of this section.

(4) Any licensee conducting radiographic operations or storing radioactive material at any location not listed on the license for a period in excess of one hundred eighty days in a calendar year, shall notify the department prior to exceeding the one hundred eighty days.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-195, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-195, filed 12/9/93, effective 1/9/94.]

WAC 246-243-200 Records required at temporary job sites. Each licensee conducting radiographic operations at a temporary site shall have copies of the following documents and records available at that site for inspection by the department:

(1) Appropriate license;

(2) Operating and emergency procedures;

(3) Applicable regulations;

(4) Survey records required pursuant to WAC 246-243-190 for the period of operation at the site;

(5) Direct reading dosimeter records for the period of operation at the site;

(6) The latest radiation survey instrument calibration record and leak test record for specific devices in use at the site;

(7) The latest calibration record for alarm rate meters and operability checks of pocket dosimeters and/or electronic personal dosimeters as required by WAC 246-243-150;

(8) Utilization records for each radiographic exposure device dispatched from that location as required by WAC 246-243-110;

(9) Records of equipment problems identified in daily checks of equipment as required by WAC 246-243-120;

(10) Records of alarm system and entrance control checks required by WAC 246-243-220, if applicable;

(11) The shipping papers for the transportation of radioactive materials; and

(12) When operating under reciprocity pursuant to WAC 246-232-040, a copy of the NRC or agreement state license authorizing the use of radioactive material.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-200, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-200, filed 12/9/93, effective 1/9/94.]

tive 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-200, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-153, filed 12/8/80.]

WAC 246-243-203 Form of records. Each record required by this chapter must be legible throughout the specified retention period. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of reproducing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records, such as letters, drawings, and specifications, must include all pertinent information, such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-203, filed 3/24/00, effective 4/24/00.]

WAC 246-243-205 Temporary job site notification.

(1) Each licensee shall provide notification to the department as required by the department, preferably twenty-four hours but no later than two hours, prior to beginning radiographic operations at a temporary job site. The notification will be given by using the prescribed 1-800 telephone notification system. The notification shall include:

- (a) Name and office telephone number of the licensee;
- (b) Radioactive materials license number;
- (c) Address or directions to the temporary job site;
- (d) Specific date(s), time(s), and duration of expected radiographic operations;
- (e) Names of radiographers and, if applicable, radiographer assistants taking part in the radiographic operations; and
- (f) Name and telephone number of a contact person at the temporary job site.

(2) In the event that operations at a temporary job site continue for longer than thirty days, the licensee will renotify the department, as required by subsection (1) of this section, each succeeding month.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-205, filed 12/9/93, effective 1/9/94.]

WAC 246-243-220 Special requirements for permanent radiographic installation. (1) Each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation to which this section applies shall have either:

- (a) An entrance control of the type described in WAC 246-221-102(1) that reduces the radiation level upon entry into the area; or
- (b) Both conspicuous visible and audible warning signals to warn of the presence of radiation. The visible signal shall be actuated by radiation whenever the source is exposed. The audible signal shall be actuated when an attempt is made to enter the installation while the source is exposed.

(2003 Ed.)

(2) The alarm system must be tested for proper operation with a radiation source each day before the installation is used for radiographic operations. The test must include a check of both the visible and audible signals. Entrance control devices that reduce the radiation level upon entry (designated in subsection (1)(a) of this section) shall be tested monthly. If an entrance control device or an alarm is operating improperly, it must be immediately labeled as defective and repaired within seven calendar days. The facility may continue to be used during this seven-day period, provided the licensee implements the continuous surveillance requirements of WAC 246-243-170 and uses an alarming rate meter. Test records for entrance controls and audible and visual alarm must be maintained for three years after the record is made.

(3) The department shall review and approve, in advance of construction, plans for permanent radiographic installations whose construction had not commenced by the effective date of these regulations. Construction of the permanent facility shall be in accordance with the plans approved by the department.

(4) A physical radiation survey shall be conducted and results recorded following construction or major modification of the facility to be used in the installation. Radiography shall not be conducted if exposure levels in unrestricted areas are greater than 2 mR in any hour. Any increase in source strength will require resurvey of the installation prior to the conduct of industrial radiography.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-220, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-220, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-243-220, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-157, filed 9/16/83. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-157, filed 12/8/80.]

WAC 246-243-230 Appendix A—Minimum subjects to be covered in training radiographers. (1) *Fundamentals of radiation safety*

- (a) Characteristics of ionizing radiation
- (b) Units of radiation dose and quantity of radioactivity
- (c) Hazards of exposure to radiation
 - (i) Radiation protection standards
 - (ii) Biological effects of radiation dose
- (d) Levels of radiation from sources of radiation
- (e) Methods of controlling radiation dose
 - (i) Working time
 - (ii) Working distances
 - (iii) Shielding

(2) *Radiation detection instrumentation to be used*

- (a) Use of radiation survey instruments
 - (i) Operation
 - (ii) Calibration
 - (iii) Limitations
- (b) Survey techniques
- (c) Use of personnel monitoring equipment
 - (i) Film badges
 - (ii) Pocket dosimeters
 - (iii) Thermoluminescent dosimeters

[Title 246 WAC—p. 393]

- (iv) Alarming rate meters
- (3) *Radiographic equipment to be used*
 - (a) Operation and control of remote handling equipment, radiographic exposure equipment, and storage containers, including pictures or models of source assemblies (pigtailed)
 - (b) Inspection and maintenance of equipment
 - (c) Storage, control, and disposal of licensed material
- (4) *The requirements of pertinent federal and state regulations*
- (5) *The licensee's written operating and emergency procedures*
- (6) *Case histories of radiography accidents.*

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-230, filed 3/24/00, effective 4/24/00; 94-01-073, § 246-243-230, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.050. 81-01-011 (Order 1570), § 402-36-160, filed 12/8/80; Order 1084, § 402-36-160, filed 1/14/76; Order 1, § 402-36-160, filed 1/8/69; Rules (part), filed 10/26/66.]

WAC 246-243-240 Appendix B—General guidelines for inspection of radiography equipment. (1) Panoramic devices (devices in which the source is physically removed from shielded container during exposure) should be inspected for:

- (a) Radiographic exposure unit;
 - (i) Abnormal surface radiation levels anywhere on camera;
 - (ii) Condition of safety plugs;
 - (iii) Proper operation of locking mechanism;
 - (iv) Condition of pigtail connector;
 - (v) Alignment of "S" tube with exit port;
 - (vi) Condition of carrying device (straps, handle, etc.);
 - (vii) Proper labeling;
- (b) Source tube;
 - (i) Rust, corrosion, dirt, or sludge buildup inside the source tube;
 - (ii) Condition of source tube connector;
 - (iii) Condition of source stop;
 - (iv) Kinks or damage that could prevent proper operation;
- (c) Control cables and drive mechanism;
 - (i) Proper drive mechanism for this camera, if appropriate;
 - (ii) Changes in general operating characteristics;
 - (iii) Condition of connector on drive cable;
 - (iv) Drive cable flexibility, wear, and rust;
 - (v) Excessive wear or damage to crank assembly parts;
 - (vi) Damage to drive cable conduit that could prevent the cable from moving freely;
 - (vii) Connection of the control cable connector with the pigtail connector for proper mating;
 - (viii) Proper operation of source position indicator, if applicable.
- (2) Directional beam devices should be inspected for:
 - (a) Abnormal surface radiation;
 - (b) Changes in the general operating characteristics of the unit;
 - (c) Proper operation of shutter mechanism;
 - (d) Chafing or binding of shutter mechanism;

- (e) Damage to the device which might impair its operation;
- (f) Proper operation of locking mechanism;
- (g) Proper drive mechanism with this camera, if appropriate;
- (h) Condition of carrying device (strap, handle, etc.);
- (i) Proper labeling.

[Statutory Authority: RCW 70.98.050. 94-01-073, § 246-243-240, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-243-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 83-19-050 (Order 2026), § 402-36-165, filed 9/16/83.]

WAC 246-243-250 Appendix C—Radiographer certification. (1) Requirements for an independent certifying organization. An independent certifying organization shall:

- (a) Be an organization such as a society or association, whose members participate in, or have an interest in, the fields of industrial radiography;
- (b) Make its membership available to the general public nationwide that is not restricted because of race, color, religion, sex, age, national origin or disability;
- (c) Have a certification program open to nonmembers, as well as members;
- (d) Be an incorporated, nationally recognized organization that is involved in setting national standards of practice within its fields of expertise;
- (e) Have an adequate staff, a viable system for financing its operations, and a policy- and decision-making review board;
- (f) Have a set of written organizational by-laws and policies that provide adequate assurance of lack of conflict of interest and a system for monitoring and enforcing those by-laws and policies;
- (g) Have a committee, whose members can carry out their responsibilities impartially, to review and approve the certification guidelines and procedures, and to advise the organization's staff in implementing the certification program.
- (h) Have a committee, whose members can carry out their responsibilities impartially, to review complaints against certified individuals and to determine appropriate sanctions;
- (i) Have written procedures describing all aspects of its certification program, maintain records of the current status of each individual's certification and the administration of its certification program;
- (j) Have procedures to ensure that certified individuals are provided due process with respect to the administration of its certification program, including the process of becoming certified and any sanctions imposed against certified individuals;
- (k) Have procedures for proctoring examinations, including qualifications for proctors. These procedures must ensure that the individuals proctoring each examination are not employed by the same company or corporation (or a wholly owned subsidiary of such company or corporation) as any of the examinees;
- (l) Exchange information about certified individuals with the department, the US Nuclear Regulatory Commis-

sion, other independent certifying organizations and/or agreement states and allow periodic review of its certification program and related records; and

(m) Provide a description to the department of its procedures for choosing examination sites and for providing an appropriate examination environment.

(2) Requirements for certification programs. All certification programs must:

(a) Require applicants for certification to:

(i) Receive training in the topics set forth in WAC 246-243-230 or equivalent NRC or agreement state regulations; and

(ii) Satisfactorily complete a written examination covering these topics;

(b) Require applicants for certification to provide documentation that demonstrates that the applicant has:

(i) Received training in the topics set forth in WAC 246-243-230 or equivalent NRC or agreement state regulations;

(ii) Satisfactorily completed a minimum period of on-the-job training; and

(iii) Received verification by an agreement state or a NRC licensee that the applicant has demonstrated the capability of independently working as a radiographer;

(c) Include procedures to ensure that all examination questions are protected from disclosure;

(d) Include procedures for denying an application, revoking, suspending, and reinstating a certificate;

(e) Provide a certification period of not less than three years nor more than five years;

(f) Include procedures for renewing certifications and, if the procedures allow renewals without examination, require evidence of recent full-time employment and annual refresher training;

(g) Provide a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

(3) Requirements for written examinations.

All examinations must be:

(a) Designed to test an individual's knowledge and understanding of the topics listed in WAC 246-243-230 or equivalent NRC or agreement state requirements;

(b) Written in a multiple-choice format;

(c) Have test items drawn from a question bank containing psychometrically valid questions based on the material in WAC 246-243-230.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-243-250, filed 3/24/00, effective 4/24/00.]

Chapter 246-244 WAC

RADIATION PROTECTION—WIRELINE SERVICES

WAC

246-244-001	Purpose.
246-244-010	Scope.
246-244-020	Definitions.
246-244-030	Prohibitions.
246-244-040	Limits on levels of radiation.
246-244-050	Storage precautions.
246-244-060	Transport precautions.
246-244-070	Radiation survey instruments.
246-244-080	Leak testing of sealed sources.
246-244-090	Inventories.
246-244-100	Utilization logs/records.

(2003 Ed.)

246-244-110	Design, performance, and certification criteria for sealed sources used in downhole operations.
246-244-120	Labeling.
246-244-130	Inspection and maintenance.
246-244-140	Training requirements.
246-244-150	Operating and emergency procedures.
246-244-160	Personnel monitoring.
246-244-170	Radioactive contamination control.
246-244-180	Security.
246-244-190	Handling tools.
246-244-200	Subsurface tracer studies.
246-244-210	Radiation surveys.
246-244-220	Documents and records required at field stations.
246-244-230	Documents and records required at temporary job sites.
246-244-240	Notification of incidents, abandonment, and lost sources.

WAC 246-244-001 Purpose. This chapter establishes radiation safety requirements for persons using sources of radiation for wireline service operations including mineral logging, radioactive markers, and/or subsurface tracers studies. The requirements of this chapter are in addition to, and not in substitution for, requirements of chapters 246-220, 246-221, 246-222, 246-232, and 246-235 WAC.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-001, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-010, filed 12/11/86.]

WAC 246-244-010 Scope. The regulations in this chapter apply to all licensees who use sources of radiation for wireline service operations, including mineral logging, radioactive markers, uranium sinker bars, or subsurface tracer studies.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-025, filed 12/11/86.]

WAC 246-244-020 Definitions. As used in this chapter, the following definitions apply:

(1) "Casing" means a metal pipe or tube used as a lining for oil or gas wells to prevent collapse of the well-bore.

(2) "Field station" means a facility where radioactive sources may be stored or used and from which equipment is dispatched to temporary job sites.

(3) "Fresh water aquifer" means a geological formation that is capable of yielding a significant amount of fresh water to a well or spring.

(4) "Injection tool" means a device used for controlled subsurface injection of radioactive tracer material.

(5) "Irretrievable well-logging source" means any sealed source containing licensed material that is pulled off or not connected to the wireline that suspends the source in the well and for which all reasonable effort at recovery has been expended.

(6) "Logging assistant" means an individual who assists the logging supervisor in performing the well-logging operations.

(7) "Logging supervisor" means an individual who provides personal supervision of the use of licensed material at the temporary job site and who is responsible to the licensee for assuring compliance with requirements of the department's regulations and the conditions of the license.

[Title 246 WAC—p. 395]

(8) "Logging tool" means a device used subsurface to perform well-logging.

(9) "Mineral logging" means any logging performed for the purpose of mineral (including water) exploration other than oil or gas.

(10) "Personal supervision" means guidance and instruction by the supervisor who is physically present at the job site and watching the performance of the operation in such proximity that contact is maintained and immediate assistance given as required.

(11) "Radioactive marker" means licensed material used for the purpose of depth determination or direction orientation. This term includes radioactive collar markers and radioactive iron nails.

(12) "Sealed source" means any licensed material that is encased in a capsule designed to prevent leakage or escape of the radioactive material.

(13) "Source holder" means the housing or assembly into which a radioactive source is placed for the purpose of facilitating the handling and use of such source in well-logging operations.

(14) "Subsurface tracer study" means, for the purpose of this chapter, the release of unsealed licensed material or a substance labeled with licensed material in a single well or multiple wells for the purpose of tracing the movement or position of the material or substance in the well-bore or adjacent formation(s) (this term does not include the use of licensed material in field flooding studies).

(15) "Surface casing" means a pipe or tube used as a lining in a well to isolate the fresh water zone from the well.

(16) "Temporary job site" means any location to which radioactive materials have been dispatched or taken to perform wireline service operations or subsurface tracer studies.

(17) "Uranium sinker bar" means a weight containing depleted uranium used for the purpose of providing additional force to pull a logging tool down toward the bottom of a well.

(18) "Well-bore" means any drilled hole in which wireline service operations and/or subsurface tracer studies are performed.

(19) "Well-logging" means the lowering and raising of measuring devices or tools which contain sources of radiation into well-bores or cavities (salt domes, etc.) for the purpose of obtaining information about the well and/or adjacent formations which may be used in oil, gas, mineral or geological explorations.

(20) "Well-logging operation" means any activity involving licensed material performed in a well, including well-logging, mineral logging, subsurface tracer studies, use of radioactive markers, radioactive iron nails, uranium sinker bars, and radioactive sands, and transportation or storage of same.

(21) "Wireline" means a cable containing one or more electrical conductors which is used to lower and raise logging tools in the well-bore.

(22) "Wireline service operation" means any evaluation or mechanical service which is performed in the well-bore using devices containing radioactive material on a wireline.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-030, filed 12/11/86.]

WAC 246-244-030 Prohibitions. No licensee shall perform wireline service operations with a sealed source(s) or conduct subsurface tracer studies with sources of radiation unless, prior to commencement of the operation, the licensee has a written agreement with the well operator, well owner, drilling contractor, or land owner that:

(1) In the event a sealed source is lodged downhole every reasonable effort at recovery will be made;

(2) Potentially contaminated equipment or areas will not be released until an acceptable and documented survey is performed;

(3) Specific types of recovery operations which could endanger the integrity of the sealed source encapsulation will not be permitted or conducted; and

(4) In the event a decision is made to abandon the sealed source downhole, requirements of WAC 246-244-240 shall be met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-030, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-040, filed 12/11/86.]

WAC 246-244-040 Limits on levels of radiation. Sources of radiation shall be used, stored, and transported in such a manner that the transportation requirements of chapter 246-231 WAC and the dose limitation requirements of chapter 246-221 WAC are met.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-244-040, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-040, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-060, filed 12/11/86.]

WAC 246-244-050 Storage precautions. (1) Each source of radiation, except accelerators, shall be provided with a storage and/or transport container. Such containers shall be utilized. The container shall be provided with a lock (or tamper seal, for calibration sources) to prevent unauthorized removal of, or exposure to, the source(s) of radiation. Such locks shall be used each time the source of radiation is placed in the storage/transport container.

(2) Sources of radiation shall be stored in a manner which will minimize danger from explosion and/or fire.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-080, filed 12/11/86.]

WAC 246-244-060 Transport precautions. (1) Transport containers shall be physically secured to the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal.

(2) Transport of radioactive material shall be in accordance with applicable provisions of the United States Department of Transportation, as required by chapter 246-231 WAC.

[Statutory Authority: RCW 70.98.050. 99-15-105, § 246-244-060, filed 7/21/99, effective 8/21/99. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-060, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-100, filed 12/11/86.]

WAC 246-244-070 Radiation survey instruments. (1)

The licensee or registrant shall maintain and use sufficient calibrated and operable radiation survey instruments at each field station and temporary job site to make physical radiation surveys as required. Instrumentation shall be capable of measuring 0.001 mSv (0.1 millirem) per hour through at least 0.5 mSv (50 millirem) per hour.

(2) Each radiation survey instrument shall be calibrated:

(a) At intervals not to exceed six months and after each instrument servicing;

(b) At energies and radiation levels appropriate for use;

(c) At two points located approximately one-third and two-thirds at full scale on each scale (for logarithmic scale, at midrange of each decade, and at two points of at least one decade); and

(d) Such that accuracy within ± 20 percent of the true radiation levels can be demonstrated on each scale.

(3) Each licensee shall have available additional calibrated and operable radiation detection instruments capable of detecting radiation and contamination levels that could be encountered during well-logging operations or during the event of an accident, e.g., an alpha meter in case of Am-241 source rupture, a contamination meter and probe, and a high level meter capable of detecting radiation levels up to at least one roentgen per hour. The licensee may own such instruments or may make prior arrangements to obtain them expeditiously from a second party as necessary.

(4) Calibration records shall be maintained for a period of at least three years for inspection by the department.

[Statutory Authority: RCW 70.98.050. 01-05-110, § 246-244-070, filed 2/21/01, effective 3/24/01. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-120, filed 12/11/86.]

WAC 246-244-080 Leak testing of sealed sources.

Each licensee utilizing sealed sources of radioactive material shall have the sources tested for leakage and/or contamination in accordance with WAC 246-221-080.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-080, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-140, filed 12/11/86.]

WAC 246-244-090 Inventories. (1) Each licensee shall conduct a physical inventory at intervals not to exceed three months to account for all sources of radiation received and possessed. Records of such inventories shall be maintained for at least two years from the date of the inventory for inspection by the department and shall include the quantities, kinds, and serial numbers of sources of radiation, the location where such sources of radiation are assigned and/or stored,

(2003 Ed.)

the date of the inventory, and the name of the individual conducting the inventory.

(2) Spotmarkers containing radioactive material shall be inventoried prior to arrival at a field site and prior to departure. Records of such inventories shall include the quantity and kinds of radioactive material, serial numbers where appropriate, the date and name of the person performing the inventory, and shall be maintained for inspection by the department.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-160, filed 12/11/86.]

WAC 246-244-100 Utilization logs/records. Each licensee shall maintain current records, which shall be kept available for inspection by the department for two years from the date of recorded event, showing the following information for each source of radiation:

(1) Make, model, and serial number of each source of radiation used;

(2) The identity of the well-logging supervisor and logging assistants to whom assigned;

(3) The locations where used and dates of use; and

(4) In the case of tracer materials and/or radioactive markers, the utilization records shall also indicate the radionuclide and quantity of activity used in a particular well.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-180, filed 12/11/86.]

WAC 246-244-110 Design, performance, and certification criteria for sealed sources used in downhole operations. (1) Each sealed source, except those containing radioactive material in gaseous form, used in downhole operations shall be certified by the manufacturer, or other testing organization acceptable to the department, to meet the following minimum criteria:

(a) Be of doubly encapsulated construction;

(b) Contain radioactive material whose chemical and physical forms are as insoluble and nondispersible, respectively, as practical; and

(c) Has been individually pressure tested to at least 24,656 pounds per square inch absolute (170 MN/m²) without leakage or failure.

(2) Except those containing radioactive material in gaseous form, in the absence of a certificate from a transferor certifying that an individual sealed source meets the requirements of subsections (1) and (3) of this section, the sealed source shall not be put into use until such determinations and testings have been performed and acceptable documented results obtained.

(3) Each sealed source, except those containing a radioactive material in gaseous form, used in downhole operations shall be certified by the manufacturer, or other testing organization acceptable to the department, to meet the sealed source performance requirements for oil well-logging as contained in the January 1986 or most current American National Standard N542, *Sealed Radioactive Sources, Classification*.

(4) Certification documents shall be maintained for inspection by the department for a period of three years after

[Title 246 WAC—p. 397]

source disposal. If a source is abandoned downhole, the certification documents shall be maintained until the department authorizes disposition.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-200, filed 12/11/86.]

WAC 246-244-120 Labeling. (1) Each source, source holder, and logging tool containing radioactive material shall bear a durable, legible, and clearly visible marking or label which has, at a minimum, the standard radiation caution symbol, with or without the conventional color requirement, and the following wording: "DANGER (or CAUTION) RADIOACTIVE MATERIAL." This labeling shall be on the smallest component transported as a separate piece of equipment.

(2) Each transport container shall have permanently attached to it a durable, legible, and clearly visible label which has, at a minimum, the standard radiation caution symbol and colors and the following wording: "DANGER (or CAUTION) RADIOACTIVE MATERIAL, NOTIFY CIVIL AUTHORITIES IF FOUND."

(3) The licensee may not use a uranium sinker bar in well-logging operations after December 31, 1987, unless it is clearly and legibly impressed with the words "CAUTION-RADIOACTIVE DEPLETED URANIUM" and "NOTIFY CIVIL AUTHORITIES IF FOUND."

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-220, filed 12/11/86.]

WAC 246-244-130 Inspection and maintenance. (1) Each licensee shall conduct a program of visual inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, injection tools, and sinker bars to ensure that the required labeling is legible and that visual physical damage is absent. The licensee shall perform the visual inspection and maintenance at least every three months. Such inspection and maintenance shall follow the manufacturers recommendations for the equipment involved. Licensees shall maintain records of inspections and maintenance for three years for inspection by the department.

(2) Each licensee shall maintain appropriate copies of manufacturer's operating and maintenance instructions at those locations where such inspection and maintenance is performed.

(3) Each licensee shall inspect the source holders, logging tools, and source handling tools for obvious defects before the equipment is used each day to ensure that the equipment is in good working condition.

(4) If any inspection conducted pursuant to this section reveals damage to the labeling or to components critical for radiation safety, the licensee shall remove the item from service until authorized repairs are made.

(5) Removal of a sealed source from a source holder, and maintenance on sealed sources, holders, or pressure housings in which sealed sources are placed, or on other equipment containing a sealed source may not be performed unless a written instruction for the particular operation in question has

been approved by the department as part of the license application.

(6) If a sealed source is stuck in a source holder or logging tool, the licensee may not perform any operations such as drilling, cutting, or chiseling on the source holder or logging tool, unless it is specifically licensed by the department to perform this operation.

(7) The repair, opening, or modification of any sealed source must be performed only by persons specifically licensed to do so by the department, the United States Nuclear Regulatory Commission, an agreement state, or a licensing state.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-240, filed 12/11/86.]

WAC 246-244-140 Training requirements. (1) The licensee may not permit an individual to act as a logging supervisor until that person:

(a) Has completed at least forty hours of formal training in a course recognized by the department, the United States Nuclear Regulatory Commission, an agreement state, or a licensing state covering the subjects outlined in subsection (5) of this section;

(b) Has received copies of and instruction in:

(i) Washington state regulations contained in this chapter and in the applicable chapters 246-220, 246-221, and 246-222 WAC or their equivalent;

(ii) The license under which the logging supervisor will perform well-logging operations; and

(iii) The licensee's operating, recordkeeping, and emergency procedures.

(c) Has completed three months of on-the-job training and demonstrated competence in the use of licensed materials, remote handling tools, and radiation survey instruments by a field evaluation; and

(d) Has demonstrated understanding of the requirements in (a) and (b) of this subsection by successfully completing a closed book written test.

(2) The licensee may not permit an individual to act as a logging assistant until that person:

(a) Has received copies of and instruction in the licensee's operating and emergency procedures;

(b) Has demonstrated understanding of the materials listed in subsection (1)(a) and (b) of this section by successfully completing a closed book written test; and

(c) Has received instructions in the use, under the personal supervision of the logging supervisor, of tracer material, sealed sources, remote handling tools, and radiation survey instruments, as appropriate.

(3) Each licensee shall provide for documented refresher training of logging supervisors and logging assistants at intervals not to exceed twelve months.

(4) Each licensee shall maintain a record of each logging supervisor's and logging assistant's training, including copies and dates of written tests for a minimum of three years following the termination of employment.

(5) Each licensee shall include the following subjects in the formal training required by this chapter:

(a) **Fundamentals of radiation safety:**

- (i) Characteristics of radiation;
- (ii) Units of radiation dose and quantity of radioactivity;
- (iii) Hazards of exposure to radiation;
- (iv) Levels of radiation from licensed material;
- (v) Methods of controlling radiation dose:
 - (A) Working time;
 - (B) Working distances;
 - (C) Shielding;
 - (D) Radiation safety practices, including prevention and contamination and methods of decontamination;
- (b) **Radiation detection instrumentation to be used:**
 - (i) Use of radiation survey instruments:
 - (A) Operation;
 - (B) Calibration;
 - (C) Limitations;
 - (ii) Survey techniques;
 - (iii) Use of personnel monitoring equipment;
- (c) **Equipment to be used:**
 - (i) Handling equipment and remote handling tools;
 - (ii) Licensed materials;
 - (iii) Storage, control, and disposal of equipment and licensed material;
 - (iv) Operation and control of equipment and licensed materials;
 - (v) Maintenance of equipment;
- (d) Requirements of pertinent state and federal regulations;
- (e) Case histories and potential consequences of accidents in well-logging operations.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-140, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-260, filed 12/11/86.]

WAC 246-244-150 Operating and emergency procedures. The licensee's operating and emergency procedures shall include instruction in at least the following:

- (1) Handling and use of sources of radiation to be employed such that no individual is likely to be exposed to radiation doses in excess of the standards established in chapter 246-221 WAC;
- (2) Methods and occasions for conducting radiation surveys;
- (3) Methods and occasions for locking and securing sources of radiation;
- (4) Personnel monitoring and the use and care of personnel monitoring equipment;
- (5) Transportation of sources of radiation to temporary job sites and field stations, including the marking, labeling, packaging, and placing of sources of radiation in vehicles, shipping papers, placarding of vehicles, and physical securing of sources of radiation to transport vehicles during transportation to prevent accidental loss, tampering, or unauthorized removal;
- (6) Minimizing personnel exposure, including that from inhalation and ingestion of licensed material, during well-logging operations and in the event of an accident;
- (7) Procedure for notifying proper personnel in the event of an accident;

(2003 Ed.)

- (8) Maintenance of records;
- (9) Inspection and maintenance of source holders, logging tools, source handling tools, storage containers, transport containers, and injection tools;
- (10) Procedures to be followed in the event a sealed source is lodged downhole or ruptured;
- (11) Procedures to be used for picking up, receiving, and opening packages containing radioactive material;
- (12) The procedure and the use of tools for remote handling of sealed sources and radioactive tracer material, except low activity calibration sources;
- (13) The procedure to use for detecting contamination and for preventing the spread of contamination; and
- (14) The procedure to be used to decontaminate the environment, equipment, and/or personnel if any or all are contaminated.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-150, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-280, filed 12/11/86.]

WAC 246-244-160 Personnel monitoring. (1) The licensee may not permit an individual to act as a logging supervisor or logging assistant unless that person wears, at all times during well-logging operations, either a film badge or thermoluminescent dosimeter (TLD). Each film badge or TLD must be assigned to and worn by only one individual. The film badge must be exchanged and analyzed at least monthly and TLD badges exchanged and analyzed at least every three months. The licensee shall have each badge or TLD processed in a timely fashion.

(2) The licensee shall provide appropriate bioassay services to individuals using licensed materials for subsurface tracer studies.

(3) The licensee shall keep reports received from the badge or TLD processor and from the bioassay service laboratory for inspection until the department authorizes disposition or terminates the license.

(4) Personnel monitoring devices and equipment shall monitor for beta, gamma, and neutron radiation as appropriate.

(5) Each licensee shall adhere to the requirements of the department's Regulatory Guide 8.20 *Bioassay Program Criteria for I-125 and I-131*.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-160, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-300, filed 12/11/86.]

WAC 246-244-170 Radioactive contamination control. (1) During efforts to recover a sealed source lodged in the well, the licensee shall continuously monitor, with an appropriate radiation detection instrument, the circulating fluids from the well to check for contamination resulting from damage to the sealed source.

(2) If the licensee detects evidence that the sealed source has ruptured or licensed materials have caused contamination, it shall initiate required emergency procedures.

[Title 246 WAC—p. 399]

(3) If contamination results from the use of licensed material in well-logging operations, the licensee shall decontaminate all work areas, equipment, and unrestricted areas to levels deemed appropriate by the department.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-320, filed 12/11/86.]

WAC 246-244-180 Security. During each logging or tracer application, the logging supervisor or other designated employee shall maintain direct surveillance of the operation to protect against unauthorized and/or unnecessary entry into the restricted area (as defined in WAC 246-220-010).

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-244-180, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-340, filed 12/11/86.]

WAC 246-244-190 Handling tools. The licensee shall provide and require the use of tools that will assure remote handling of sealed sources other than low activity calibration sources.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-360, filed 12/11/86.]

WAC 246-244-200 Subsurface tracer studies. (1) Protective gloves and other appropriate protective clothing and equipment shall be used by all personnel handling radioactive tracer material. Adequate precautions shall be taken to avoid ingestion or inhalation of radioactive material, and to avoid contamination of field site stations and temporary job sites.

(2) No licensee shall cause the injection or administration of radioactive material into fresh water aquifers without prior written authorization from the department and any other appropriate state agency.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-380, filed 12/11/86.]

WAC 246-244-210 Radiation surveys. (1) Radiation surveys shall be made and recorded for each area where radioactive materials are stored at intervals not to exceed six months. In those cases where neutron sources are involved, calculations for dose rate may be substituted for direct measurement.

(2) Radiation surveys shall be made and recorded for the radiation levels in occupied positions and on the exterior of each vehicle used to transport radioactive material. Such surveys shall include each and every source of radiation or combination of sources to be transported in the vehicle. In those cases where neutron sources are involved, calculations for dose rate may be substituted for direct measurement.

(3) After removal of the sealed source from the logging tool and before departing the job site, the logging tool detector shall be energized and/or a survey meter used to assure that the logging tool and all related equipment are free of contamination.

(4) Radiation surveys shall be made and recorded at the job site or well head for each tracer operation, except those

using Hydrogen-3, Carbon-14, or Sulfur-35. Such surveys shall include measurements of radiation levels immediately before and after each operation.

(5) If the licensee suspects that, as a result of operations involving a sealed source, the encapsulation of the sealed source could have been damaged by the operation, it shall conduct a radiation survey, including a contamination survey, during and after the operation.

(6) The licensee shall make a radiation survey at the temporary job site for each subsurface tracer study. The survey must include measurement of radiation levels before and after the operation, and measurement of contamination levels after the subsurface tracer study.

(7) Records of surveys required pursuant to this section shall include the dates, the identification of individuals making the survey, the identification of survey instruments used including make, model, serial number and calibration date, and an exact description of the location of the survey with diagram. Records of these surveys shall be maintained for inspection by the department for at least two years after completion of the survey.

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-400, filed 12/11/86.]

WAC 246-244-220 Documents and records required at field stations. Each licensee shall maintain for inspection by the department the following documents and records for the specific devices and sources at the field station:

- (1) Appropriate license or equivalent documents;
- (2) Operating and emergency procedures;
- (3) Applicable regulations;
- (4) Records of the latest survey instrument calibrations required pursuant to WAC 246-244-070;
- (5) Records of the latest leak test results required pursuant to WAC 246-244-080;
- (6) Records of inventories required pursuant to WAC 246-244-090;
- (7) Utilization records required pursuant to WAC 246-244-100;
- (8) Records of inspection and maintenance required pursuant to WAC 246-244-130;
- (9) Survey records required pursuant to WAC 246-244-210; and
- (10) Training records required pursuant to WAC 246-244-140.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-15-112 (Order 184), § 246-244-220, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-244-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-38-420, filed 12/11/86.]

WAC 246-244-230 Documents and records required at temporary job sites. Each licensee conducting operations at a temporary job site shall have the following documents and records available at all times at that site for inspection by the department:

- (1) Current operating and emergency procedure(s);
- (2) Survey records required pursuant to WAC 246-244-210 for the period of operation at the site;

(3) Actual current calibration certificates (or photocopies) for the radiation survey instruments used at the site;

(4) When operating in the state of Washington under reciprocity, a copy of the appropriate license, and the Washington state rules and regulations for radiation protection;

(5) Records of current leak tests for all sealed sources which require such tests at the job site;

(6) Use logs required pursuant to WAC 246-244-100;

(7) Current United States Department of Transportation shipping papers and transport container certifications for the material transported; and

(8) Records of spotmarker inventories made prior to arrival required pursuant to WAC 246-244-090.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-230, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-440, filed 12/11/86.]

WAC 246-244-240 Notification of incidents, abandonment, and lost sources. (1) Notification of incidents and sources lost in other than downhole logging operations shall be made in accordance with appropriate provisions of chapter 246-221 WAC.

(2) The licensee shall immediately notify the state of Washington division of radiation protection by telephone (206 682-5327) and subsequently within five days by confirmatory letter if:

(a) Licensed material has been lost in or near a fresh water aquifer; or

(b) A sealed source has been ruptured. This notice must designate the well or other location and describe the magnitude and extent of licensed materials, assess the consequences of the loss or rupture, and explain efforts planned or being taken to mitigate these consequences.

(3) Whenever a sealed source or device containing radioactive material is lodged downhole, the licensee shall:

(a) Monitor the surface for the presence of radioactive contamination with an appropriate radiation survey instrument (not the logging tool itself) during logging tool recovery operations; and

(b) Notify the department immediately by telephone if radioactive contamination is detected at the surface or if the source appears to be damaged.

(4) When it becomes apparent that efforts to recover the radioactive source will not be successful, the licensee shall:

(a) Advise the well operator or owner, as appropriate, of the regulations of the state of Washington regarding abandonment, and an appropriate method of abandonment. The licensee shall ensure that such abandonment procedures are implemented within thirty days after the sealed source has been classified as irretrievable. Such abandonment procedures shall include:

(i) Immobilization and sealing in place of the radioactive source with a cement plug;

(ii) The setting of a whipstock or deflection device; and

(iii) The mounting of a permanent identification plaque at the surface of the well, containing the appropriate information required by subsection (5) of this section;

(b) Immediately notify the department by telephone (206 682-5327), giving the circumstances of the loss, and request and receive approval of the proposed abandonment procedures; and

(c) File a written report with the department within thirty days of the abandonment, setting forth the following information:

(i) Date and time of occurrence and a brief description of attempts to recover the source;

(ii) A description of the radioactive source(s) involved, including radionuclide, quantity, make, model and serial number, and chemical and physical form;

(iii) Surface location and identification of well;

(iv) Results of efforts to immobilize and seal the source in place;

(v) Depth of the radioactive source in meters or feet;

(vi) Depth to the top of cement plug in meters or feet;

(vii) Depth of the well in meters or feet; and

(viii) Information contained on the permanent identification plaque.

(5) Whenever a sealed source containing radioactive material is not recovered and is abandoned downhole, the licensee shall provide a permanent plaque at least eighteen centimeters square for posting the well or well bore (see Appendix A). This plaque shall:

(a) Be constructed of long lasting material, such as stainless steel or monel; and

(b) Contain the following information permanently and conspicuously engraved on its face:

(i) The word "CAUTION (or DANGER)";

(ii) The radiation symbol(s) with or without the conventional color requirement;

(iii) The date of abandonment (month/day/year);

(iv) The name of the well operator or well owner;

(v) The well name and well identification number(s) or other designation;

(vi) The sealed source(s) by radionuclide and quantity of activity (if more than one source is involved, information for each source shall be included);

(vii) The source depth and the depth to the top of the plug in meters or feet; and

(viii) An appropriate warning, depending on the specific circumstances of each abandonment.¹

(6) The department may, at its own discretion, impose such other requirements as it may deem necessary.

¹ An example of a suggested plaque is shown in Appendix A of this section. Appropriate warnings may include:

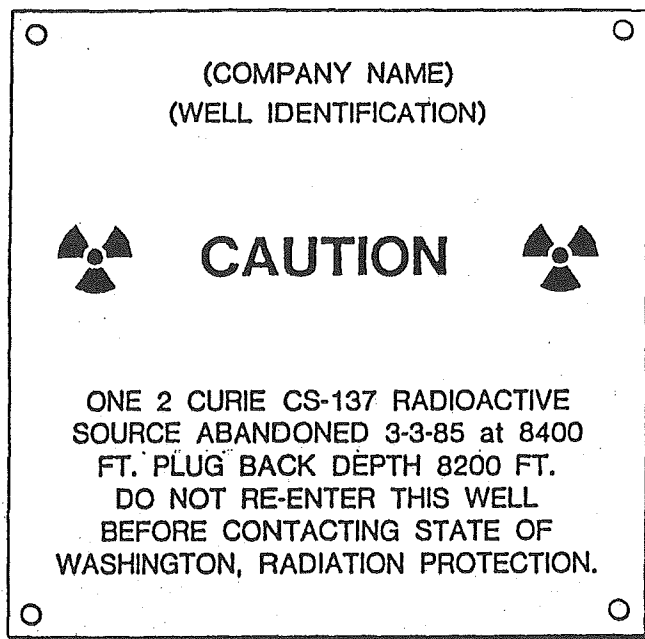
(a) "Do not drill below plug back depth";

(b) "Do not enlarge casing"; and/or

(c) "Do not reenter the hole before contacting the state of Washington division of radiation protection."

APPENDIX A

Example of Plaque for Identifying Wells Containing Sealed Sources Containing Radioactive Material Abandoned Down-hole



The size of the plaque should be convenient for use on active or inactive wells, and shall be at least eighteen centimeters square. Letter size of the word "CAUTION" or "DANGER" shall be approximately twice the letter size of the rest of the information, e.g., one-half inch and one-fourth inch letter size, respectively.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-244-240, filed 6/8/98, effective 7/9/98. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-15-112 (Order 184), § 246-244-240, filed 7/24/91, effective 8/24/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-244-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-38-500, filed 12/11/86.]

Chapter 246-246 WAC

RADIOACTIVE CRITERIA FOR LICENSE TERMINATION

WAC

246-246-001	General provisions and scope.
246-246-010	Definitions.
246-246-020	Radiological criteria for unrestricted use.
246-246-030	Criteria for license termination under restricted conditions.
246-246-040	Alternate criteria for license termination.
246-246-050	Public notification and public participation.
246-246-060	Minimization of contamination.

WAC 246-246-001 General provisions and scope. (1)

The criteria in this chapter apply to the decommissioning of all facilities licensed or registered under these regulations. For low-level waste disposal facilities (chapter 246-250 WAC), the criteria apply only to ancillary surface facilities that support radioactive waste disposal activities. The criteria do not apply to uranium and thorium recovery facilities

[Title 246 WAC—p. 402]

already subject to chapter 246-252 WAC or to uranium solution extraction facilities.

(2) The criteria in this chapter do not apply to sites which:

(a) Have been decommissioned following department approved procedures prior to the effective date of this rule; and

(b) Have previously submitted and received department approval on a license termination plan (LTP) or decommissioning plan.

(3) After a site has been decommissioned and the license terminated in accordance with the criteria in this chapter, the department will require additional cleanup only if, based on new information, it determines that the criteria of this chapter were not met and residual radioactivity remaining at the site could result in significant threat to public health and safety.

(4) When calculating total effective dose equivalent (TEDE) to the average member of the critical group the licensee shall determine the peak annual TEDE dose expected within the first one thousand years after decommissioning.

(5) The provisions of this chapter do not relieve licensees of meeting all other applicable state and federal laws and rules.

[Statutory Authority: RCW 70.98.050. 01-14-045, § 246-246-001, filed 6/29/01, effective 7/30/01; 00-07-085, § 246-246-001, filed 3/15/00, effective 4/15/00.]

WAC 246-246-010 Definitions. As used in this chapter, the following definitions apply:

(1) "Critical group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(2) "Decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

(a) Release of the property for unrestricted use and termination of the license; or

(b) Release of the property under restricted conditions and termination of the license.

(3) "Distinguishable from background" means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

(4) "Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of chapter 246-221 WAC.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-010, filed 3/15/00, effective 4/15/00.]

(2003 Ed.)

WAC 246-246-020 Radiological criteria for unrestricted use. The department will determine a site is acceptable for unrestricted use if:

(1) The residual radioactivity that is distinguishable from background radiation results in a TEDE to an average member of the critical group that does not exceed 0.25 mSv (25 mrem) per year, including that from ground water sources of drinking water; and

(2) The residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA). Determination of the levels which are ALARA must take into account consideration of any detriments, such as deaths from transportation accidents, expected to potentially result from decontamination and waste disposal.

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-246-020, filed 3/15/00, effective 4/15/00.]

WAC 246-246-030 Criteria for license termination under restricted conditions. A site is acceptable for license termination under restricted conditions if:

(1) The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of WAC 246-246-020 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal;

(2) The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (25 mrem) per year;

(3) The licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are those described in WAC 246-235-075 (4)(a), (b), and (d) and, when a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity;

(4) The licensee has submitted a decommissioning plan or license termination plan (LTP) to the department indicating the licensee's intent to decommission in accordance with WAC 246-232-060(6), and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice;

(a) Licensees proposing to decommission by restricting use of the site shall seek advice from the affected parties regarding the following matters concerning the proposed decommissioning:

(i) Whether provisions for institutional controls proposed by the licensee:

(2003 Ed.)

(A) Will provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (25 mrem) TEDE per year;

(B) Will be enforceable; and

(C) Will not impose undue burdens on the local community or other affected parties;

(ii) Whether the licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site;

(b) In seeking advice on the issues identified in WAC 246-246-030 (4)(a), the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues; and

(5) Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either:

(a) 1 mSv (100 mrem) per year; or

(b) 5 mSv (500 mrem) per year provided the licensee:

(i) Demonstrates that further reductions in residual radioactivity necessary to comply with the 1 mSv/y (100 mrem/y) value of (a) of this subsection are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm;

(ii) Makes provisions for durable institutional controls;

(iii) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every five years to assure that the institutional controls remain in place as necessary to meet the criteria of WAC 246-246-030(2) and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in WAC 246-235-075 (4)(a), (b), and (d).

[Statutory Authority: RCW 70.98.050, 00-07-085, § 246-246-030, filed 3/15/00, effective 4/15/00.]

WAC 246-246-040 Alternate criteria for license termination. (1) The department may terminate a license using alternate criteria greater than the dose criterion of WAC 246-246-020, 246-246-030(2), and 246-246-030 (4)(a)(i)(A), if the licensee:

(a) Provides assurance that public health and safety would continue to be protected, and that it is unlikely that the dose from all man-made sources combined, other than medical, would be more than the 1 mSv/y (100 mrem/y) limit of

[Title 246 WAC—p. 403]

WAC 246-221-060, by submitting an analysis of possible sources of exposure;

(b) Has employed to the extent practical restrictions on site use according to the provisions of WAC 246-246-030 in minimizing exposures at the site; and

(c) Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal;

(d) Has submitted a decommissioning plan or license termination plan (LTP) to the department indicating the licensee's intent to decommission in accordance with WAC 246-232-060(6), and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or LTP how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and addressed, as appropriate, following analysis of that advice. In seeking advice, the licensee shall provide:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues;

(2) The use of alternate criteria to terminate a license requires the approval of the department after consideration of the department staff's recommendations that will address any comments provided by the environmental protection agency and any public comments submitted pursuant to WAC 246-246-050.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-040, filed 3/15/00, effective 4/15/00.]

WAC 246-246-050 Public notification and public participation. Upon the receipt of an LTP or decommissioning plan from the licensee, or a proposal by the licensee for release of a site under WAC 246-246-030 or 246-246-040, or whenever the department deems such notice to be in the public interest, the department shall:

(1) Notify and solicit comments from:

(a) Local and other applicable state agencies in the vicinity of the site and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the decommissioning; and

(b) The environmental protection agency for cases where the licensee proposes to release a site pursuant to WAC 246-246-040.

(2) Publish a notice in the Washington State Register and in a forum, such as local newspapers, letters to state or local organizations, or other appropriate forum, that is readily accessible to individuals in the vicinity of the site, and solicit comments from affected parties.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-050, filed 3/15/00, effective 4/15/00.]

[Title 246 WAC—p. 404]

WAC 246-246-060 Minimization of contamination.

Applicants for licenses, other than renewals, after the effective date of this rule, shall describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.

[Statutory Authority: RCW 70.98.050. 00-07-085, § 246-246-060, filed 3/15/00, effective 4/15/00.]

Chapter 246-247 WAC

RADIATION PROTECTION—AIR EMISSIONS

WAC

246-247-001	Purpose.
246-247-002	Authority.
246-247-010	Applicability.
246-247-020	Exemptions.
246-247-030	Definitions.
246-247-040	Standards.
246-247-060	Applications, registration and licensing.
246-247-065	Fees.
246-247-075	Monitoring, testing and quality assurance.
246-247-080	Inspections, reporting, and recordkeeping.
246-247-085	Compliance determination for existing emission units and facilities.
246-247-100	Enforcement actions.
246-247-110	Appendix A—Application information requirements.
246-247-120	Appendix B—BARCT compliance demonstration.
246-247-130	Appendix C—ALARACT compliance demonstration.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-247-050	Registration. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-050, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-060 (Order 2671), § 402-80-060, filed 8/17/88. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-060, filed 12/11/86.] Repealed by 94-07-010, filed 3/4/94, effective 4/4/94. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC.
246-247-070	New and modified sources. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-070, filed 12/11/86.] Repealed by 94-07-010, filed 3/4/94, effective 4/4/94. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC.
246-247-090	Special reports. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-090, filed 12/11/86.] Repealed by 94-07-010, filed 3/4/94, effective 4/4/94. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC.

WAC 246-247-001 Purpose. The purpose of this chapter is to establish application requirements and procedures for the issuance of a radioactive air emissions license and for the regulation of those emissions by the department of health (hereinafter referred to as "the department") to assure compliance with the standards for radioactive air emissions set by the department of ecology pursuant to RCW 70.94.331, promulgated in chapter 173-480 WAC, and with the rules and regulations of this chapter.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-001, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-

(2003 Ed.)

247-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-010, filed 12/11/86.]

WAC 246-247-002 Authority. (1) Rules and regulations set forth herein are adopted and enforced by the department pursuant to the provisions of chapter 70.98 RCW which:

(a) Designate the department as the state's radiation control agency having sole responsibility for the administration of the regulatory, licensing, and radiation control provisions of chapter 70.98 RCW;

(b) Vest in the department the authority to formulate, adopt, promulgate, and repeal codes, rules, and regulations related to the control of sources of ionizing radiation;

(c) Authorize the department to implement an independent statewide program to monitor radioactive air emissions from sources within the state;

(d) Authorize the department to conduct inspections of facilities, both private and public, to determine whether or not there is compliance with or violation of the provisions of chapter 70.98 RCW and rules and regulations issued thereunder; and

(e) Authorize the department to require registration of sources of ionizing radiation.

(2) In addition, RCW 70.94.422 (Washington Clean Air Act) grants to the department the enforcement powers contained in that chapter.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-002, filed 3/4/94, effective 4/4/94.]

WAC 246-247-010 Applicability. (1) The standards and requirements of this chapter apply statewide at the following types of facilities that emit radionuclides to the air:

(a) Facilities licensed by the department or by the United States Nuclear Regulatory Commission (NRC);

(b) United States Department of Energy (DOE) facilities;

(c) Non-DOE federal facilities;

(d) Uranium fuel cycle facilities;

(e) Uranium mills that are processing material; and

(f) Any other facility that the department determines emits or has the potential to emit radionuclides to the ambient air.

(2) The standards and requirements of this chapter apply to point sources, nonpoint sources, and fugitive emissions.

(3) The standards and requirements of this chapter apply to stationary and mobile emission units, whether temporary or permanent.

(4) The control technology standards and requirements of this chapter apply to the abatement technology and indication devices of facilities and emission units subject to this chapter. Control technology requirements apply from entry of radionuclides into the ventilated vapor space to the point of release to the environment.

(5) In accordance with RCW 70.94.161(10), air operating permits issued under chapter 173-401 WAC shall incorporate all applicable requirements of this chapter. Therefore, all facilities listed in subsection (1) of this section that are also subject to the operating permit regulations in chapter 173-401 WAC shall be considered in compliance with the

requirements of this chapter if they comply with all the applicable requirements of the air operating permit issued under chapter 173-401 WAC. These applicable requirements shall be contained in the radioactive air emissions license which shall be incorporated as part of the air operating permit. In accordance with RCW 70.94.422(1), the department shall enforce all the requirements contained in the radioactive air emissions license.

(6) Should any of the federal regulations that have been adopted by reference in this chapter be rescinded, the affected facilities shall nonetheless comply with all other applicable requirements of this chapter.

(7) An applicant may obtain a copy of any document referenced in this chapter by contacting the department's division of radiation protection, air emissions and defense wastes section at (360) 236-3260. Mail reports, applications, and other written correspondence to the Air Emissions and Defense Wastes Section at Airdustrial Park, Building 5, P.O. Box 47827, Olympia, Washington, 98504-7827.

[Statutory Authority: RCW 70.98.050. 98-13-037, § 246-247-010, filed 6/8/98, effective 7/9/98. Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-010, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-020, filed 12/11/86.]

WAC 246-247-020 Exemptions. (1) The following types of facilities or sources of radiation are exempt from the requirements of this chapter because they release no airborne radioactivity, or they prima facie comply with the standards in WAC 246-247-040, or they are already adequately regulated under other requirements:

(a) Users of only sealed sources;

(b) Sealed sources;

(c) Accelerators less than 200 MeV;

(d) Nuclear-powered vessels underway or moored dockside unless under a maintenance condition with a potential-to-emit;

(e) Uranium mill tailings piles disposed of under 40 CFR Part 192.

(2) Exemption determinations.

(a) Any exemptions shall be consistent with 40 CFR 61. No exemptions from the standards in WAC 246-247-040 will be granted.

(b) A nonfederal facility may request exemption from some of the requirements of WAC 246-247-060 and 246-247-075 if the potential-to-emit, for the emission unit(s) under consideration, results in compliance at level I of the COMPLY computer code or level I of the NCRP's Commentary No. 3, or equivalent as approved by the department.

(c) A federal facility may request exemption from some of the requirements of WAC 246-247-060 and 246-247-075 if the potential-to-emit, for the emission unit(s) under consideration, results in a TEDE to the MEI from all pathways less than 0.1 mrem/yr.

(d) The facility shall submit all the data necessary to make the exemption determinations of (b) and (c) of this subsection. The department shall determine if any exemptions apply.

(e) Commercial nuclear power plants may request exemption from some of the requirements of this chapter in order to minimize dual regulation with the NRC.

(3) The department may require a facility with exempt emission units to submit a radioactive air emissions report to confirm compliance with applicable standards. The department reserves the right to conduct inspections and audits of the facility to confirm the status of its exempt emission units.

(4) Naturally occurring airborne radionuclides are exempt from the requirements of this chapter unless the concentrations or rates of emissions have been enhanced by industrial processes.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-020, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-247-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-80-030, filed 12/11/86.]

WAC 246-247-030 Definitions. Terms used in this chapter have the definitions set forth below with reference to radioactive air emissions.

(1) "Abatement technology" means any mechanism, process or method that has the potential to reduce public exposure to radioactive air emissions. Abatement control features include automatic mechanisms and administrative controls used in the operation and control of abatement technology from entry of radionuclides into the ventilated vapor space to release to the environment.

(2) "Administrative control" means any policy or procedure that limits the emission of radionuclides.

(3) "ALARA" means as low as reasonably achievable making every reasonable effort to maintain exposures to radiation as far below the dose standards in this chapter as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other socioeconomic considerations, and in relation to the utilization of nuclear energy, ionizing radiation, and radioactive materials in the public interest. See WAC 246-220-007.

(4) "As low as reasonably achievable control technology" (ALARACT) means the use of radionuclide emission control technology that achieves emission levels that are consistent with the philosophy of ALARA. ALARACT compliance is demonstrated by evaluating the existing control system and proposed nonsignificant modifications in relation to applicable technology standards and other control technologies operated successfully in similar applications. In no event shall application of ALARACT result in emissions of radionuclides that could cause exceedance of the applicable standards of WAC 246-247-040. See the definition of ALARA in this section. Note that ALARACT is equivalent to, but replaces, RACT in the May 7, 1986, version of chapter 173-480 WAC.

(5) "Annual possession quantity" means the sum of the quantity of a radionuclide on hand at the beginning of the calendar year and the quantity of that radionuclide received or produced during the calendar year.

(6) "Best available radionuclide control technology" (BARCT) means technology that will result in a radionuclide emission limitation based on the maximum degree of reduction for radionuclides from any proposed newly constructed or significantly modified emission units that the licensing authority determines is achievable on a case-by-case basis. A BARCT compliance demonstration must consider energy, environmental, and economic impacts, and other costs through examination of production processes, and available methods, systems, and techniques for the control of radionuclide emissions. A BARCT compliance demonstration is the conclusion of an evaluative process that results in the selection of the most effective control technology from all known feasible alternatives. In no event shall application of BARCT result in emissions of radionuclides that could exceed the applicable standards of WAC 246-247-040. Control technology that meets BARCT requirements also meets ALARACT requirements. See WAC 173-480-030 and 246-247-120.

(7) "Committed effective dose equivalent" (CEDE) means the sum of the products of absorbed dose from internally deposited radionuclides and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body of reference man over a fifty-year period.

(8) "Construction" means fabrication, erection, or installation of a new building, structure, plant, process, or operation within a facility that has the potential to emit airborne radionuclides. Construction includes activities of a permanent nature aimed at completion of the emission unit, such as pouring concrete, putting in a foundation, or installing utilities directly related to the emission unit. It does not include preliminary activities such as tests to determine site suitability, equipment procurement and storage, site clearing and grading, and the construction of ancillary buildings.

(9) "Decommissioning" means actions taken to reduce or eliminate the potential public health and safety impacts of a building, structure, or plant that has permanently ceased operations, including, but not limited to, actions such as decontamination, demolition, and disposition.

(10) "Emission unit" means any single location that emits or has the potential to emit airborne radioactive material. This may be a point source, nonpoint source, or source of fugitive emissions.

(11) "Facility" means all buildings, structures, plants, processes, and operations on one contiguous site under control of the same owner or operator.

(12) "Fugitive emissions" are radioactive air emissions which do not and could not reasonably pass through a stack, vent, or other functionally equivalent structure, and which are not feasible to directly measure and quantify.

(13) "Indication device" means any method or apparatus used to monitor, or to enable monitoring, the operation of abatement controls or the potential or actual radioactive air emissions.

(14) "License" means a radioactive air emissions license, either issued by the department or incorporated by the department as an applicable portion of an air operating permit issued by the department of ecology or a local air pollution control authority, with requirements and limitations listed therein to which the licensed or permitted party must comply.

Compliance with the license requirements shall be determined and enforced by the department.

(15) "Maximally exposed individual" (MEI) means any member of the public (real or hypothetical) who abides or resides in an unrestricted area, and may receive the highest TEDE from the emission unit(s) under consideration, taking into account all exposure pathways affected by the radioactive air emissions.

(16) "Modification" means any physical change in, or change in the method of operation of, an emission unit that could increase the amount of radioactive materials emitted or may result in the emission of any radionuclide not previously emitted. This definition includes the cleanup of land contaminated with radioactive material, the decommissioning of buildings, structures, or plants where radioactive contamination exists, and changes that will cause an increase in the emission unit's operating design capacity. This definition excludes routine maintenance, routine repair, replacement-in-kind, any increases in the production rate or hours of operation, provided the emission unit does not exceed the release quantities specified in the license application or the operating design capacity approved by the department, addition of abatement technology as long as it is not less environmentally beneficial than existing, approved controls, and changes that result in an increase in the quantity of emissions of an existing radionuclide that will be offset by an equal or greater decrease in the quantity of emissions of another radionuclide that is deemed at least as hazardous with regard to its TEDE to the MEI.

(17) "Monitoring" means the measurement of radioactive material released to the ambient air by means of an inline radiation detector, and/or by the withdrawal of representative samples from the effluent stream. Ambient air measurements may be acceptable for nonpoint sources and fugitive emissions.

(18) "Nonpoint source" is a location at which radioactive air emissions originate from an area, such as contaminated ground above a near-surface waste disposal unit, whose extent may or may not be well-defined.

(19) "Notice of construction" (NOC) is an application submitted to the department by an applicant that contains information required by WAC 246-247-060 for proposed construction or modification of a registered emission unit(s), or for modification of an existing, unregistered emission unit(s).

(20) "Point source" is a discrete, well-defined location from which radioactive air emissions originate, such as a stack, vent, or other functionally equivalent structure.

(21) "Potential-to-emit" means the rate of release of radionuclides from an emission unit based on the actual or potential discharge of the effluent stream that would result if all abatement control equipment did not exist, but operations are otherwise normal. Determine the potential-to-emit by one of the following methods:

- (a) Multiply the annual possession quantity of each radionuclide by the release fraction for that radionuclide, depending on its physical state. Use the following release fractions:
 - (i) 1 for gases;
 - (ii) 10^{-3} for liquids or particulate solids; and
 - (iii) 10^{-6} for solids.

Determine the physical state for each radionuclide by considering its chemical form and the highest temperature to which it is subjected. Use a release fraction of one if the radionuclide is subjected to temperatures at or above its boiling point; use a release fraction of 10^{-3} if the radionuclide is subjected to temperatures at or above its melting point, but below its boiling point. If the chemical form is not known, use a release fraction of one for any radionuclide that is heated to a temperature of one hundred degrees Celsius or more, boils at a temperature of one hundred degrees Celsius or less, or is intentionally dispersed into the environment. Other release fractions may be used only with the department's approval; or

(b) Perform a back-calculation using measured emission rates and *in situ* measurements of the control equipment efficiencies, as approved by the department; or

(c) Measure the quantities of radionuclides captured in each control device, coupled with *in situ* measurements of the control equipment efficiencies, as approved by the department; or

(d) Sample the effluent upstream from all control devices, as approved by the department; or

(e) Use an alternative method approved by the department.

(22) "Replacement-in-kind" means the substitution of existing systems, equipment, components, or devices of an emission unit's control technology with systems, equipment, components, or devices with equivalent, or better, performance specifications that will perform the same function(s).

(23) "Routine" means:

(a) Maintenance, repair, or replacement-in-kind performed on systems, equipment, components, or devices of an emission unit's abatement technology as a planned part of an established inspection, maintenance, or quality assurance program that does not increase the emission unit's operating design capacity; or

(b) Normal, day-to-day operations of a facility.

(24) "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix, or radioactive material in airtight containers, designed to prevent release and dispersal of the radioactive material under the most severe conditions encountered in normal use and handling.

(25) "Significant" means the potential-to-emit airborne radioactivity at a rate that could increase the TEDE to the MEI by at least 1.0 mrem/yr as a result of a proposed modification.

(26) "Total effective dose equivalent" (TEDE) means the sum of the dose equivalent due to external exposures and the CEDE due to internal exposures.

(27) "Uranium fuel cycle" means the operations of milling uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity in a nuclear power plant that uses uranium fuel, and reprocessing of spent uranium fuel, to the extent that these operations solely support the production of electrical power for public use. Excluded are mining operations, waste disposal sites, transportation of any radioactive material, and the reuse of recovered nonuranium special nuclear and by-product materials from the cycle.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-030, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-060 (Order 2671), § 402-80-040, filed 8/17/88. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-040, filed 12/11/86.]

WAC 246-247-040 Standards. (1) Standards for radioactive air emissions in the state of Washington are contained in WAC 173-480-040, 173-480-050, and 173-480-060 and in 40 CFR Part 61, subparts H and I published in the *Federal Register* on December 15, 1989. In accordance with WAC 173-480-050(3), the department shall enforce the most stringent standard in effect, notwithstanding any agreement between EPA and any other agency, including those agreements made pursuant to 42 USC 7412(d)(9).

(2) In addition to the radioactive air emission standards of subsection (1) of this section, the department's radioactive materials licensees shall comply with the limitations on radioactive air emissions contained in WAC 246-221-070.

(3) All new construction and significant modifications of emission units commenced after August 10, 1988 (the date this chapter originally became effective) shall utilize BARCT (see Appendix B).

(4) All existing emission units and nonsignificant modifications shall utilize ALARACT (see Appendix C).

(5) In order to implement these standards, the department may set limits on emission rates for specific radionuclides from specific emission units and/or set requirements and limitations on the operation of the emission unit(s) as specified in a license.

(6) All emissions of radionuclides, including those due to emergency conditions resulting from startup, shutdown, maintenance activities, or process upsets are subject to the standards of this section and, therefore, subject to the enforcement actions of WAC 246-247-100.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-040, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-050, filed 12/11/86.]

WAC 246-247-060 Applications, registration and licensing. This section describes the information requirements for approval to construct, modify, and operate an emission unit. Any notice of construction (NOC) requires the submittal of the information listed in Appendix A. Complex projects may require additional information. The applicant should contact the department early in the conceptual design phase for guidance on applicable control technologies to consider.

Appendices B and C outline the procedures to demonstrate compliance with the BARCT and ALARACT standards. Based on the Appendix A information provided, the department may advise the applicant which subset of technologies to consider as candidates for meeting BARCT or ALARACT requirements.

For those facilities subject to the operating permit regulations in chapter 173-401 WAC, the radioactive air emissions license will be incorporated as an applicable portion of

the air operating permit issued by the department of ecology or a local air pollution control authority. The department will be responsible for determining the facility's compliance with and enforcing the requirements of the radioactive air emissions license.

(1) Requirements for new construction or modification of emission units.

(a) Early in the design phase, the applicant shall submit a NOC containing the information required in Appendix A.

(b) Within thirty days of receipt of the NOC, the department shall inform the applicant if additional information is required. The department may determine, on the basis of the information submitted, that the requirements of BARCT or ALARACT have been met, or may require the applicant to submit a BARCT or ALARACT demonstration compatible with Appendix B or C, respectively.

(c) Within sixty days of receipt of all required information, the department shall issue an approval or denial to construct. The department may require changes to the final proposed control technology.

(d) The applicant may request a phased approval process by so stating and submitting a limited application. The department may grant a conditional approval to construct for such activities as would not preclude the construction or installation of any control or monitoring equipment required after review of the completed application.

(e) The department shall issue a license, or amend an existing license, authorizing operation of the emission unit(s) when the proposed new construction or modification is complete. For facilities subject to the air operating permit requirements of chapter 173-401 WAC, the license shall become part of the air operating permit issued by the department of ecology or a local air pollution control authority. For new construction, this action shall constitute registration of the emission unit(s).

(2) Requirements for modification of unregistered emission units that are not exempt from these regulations.

(a) The applicant shall submit an application containing the information required in Appendix A.

(b) Within thirty days of receipt of the application, the department shall inform the applicant if additional information is required. The department may determine, on the basis of the information submitted, that the requirements of BARCT or ALARACT have been met, or may require the applicant to submit a BARCT or ALARACT demonstration compatible with Appendix B or C, respectively.

(c) Within sixty days of receipt of all required information, the department shall issue or amend the license. For facilities subject to the air operating permit requirements of chapter 173-401 WAC, the license shall become part of the air operating permit issued by the department of ecology or a local air pollution control authority. This action shall constitute registration of the emission unit(s). A determination of noncompliance may result in the issuance of a notice of violation.

(d) The department reserves the right to require the owner of an existing, unregistered emission unit to make modifications necessary to comply with the applicable standards of WAC 246-247-040.

(3) If an emission unit is in violation of any standards contained in WAC 246-247-040, the facility shall either submit a compliance plan which describes how it intends to achieve compliance with the standards, and/or cease operation of the emission unit(s). The facility shall submit the compliance plan within forty-five days of the notice of violation. The cessation of operation of the emission unit(s) shall not necessarily exempt the facility from the requirements of this chapter if active or passive ventilation and radioactive air emission controls will still be required. The department reserves the right to take further enforcement action, if necessary, in accordance with WAC 246-247-100.

(4) The facility shall notify the department at least seven calendar days prior to any planned preoperational tests of new or modified emission units that involve emissions control, monitoring, or containment systems of the emission unit(s). The department reserves the right to witness or require preoperational tests involving the emissions control, monitoring, or containment systems of the emission unit(s).

(5) The license shall specify the requirements and limitations of operation to assure compliance with this chapter. The facility shall comply with the requirements and limitations of the license.

(6) All radioactive air emissions licenses issued by the department, except those issued to radioactive materials licensees, shall have an expiration date of five years from date of issuance or as specified in the air operating permit. For radioactive material licensees, the requirements and limitations for the operation of emission units shall be incorporated into their radioactive materials license, and shall expire when the radioactive materials license expires.

(7) Each federal facility that comes under the authority of this chapter shall hold one license for each site, base, or installation. When applicable, the license shall be part of the facility's air operating permit.

(8) Facilities may request a single categorical license which identifies limits and conditions of operation for similar multipurpose temporary and/or portable emission units. When applicable, the license shall be part of the facility's air operating permit.

(9) All facilities with licensed emission units, except for radioactive materials licensees, shall submit a request to the department for renewal of their radioactive air emissions license at least sixty days prior to expiration of the license or as required by the air operating permit. All renewal requests shall include a summary of the operational status of all emission units, the status of facility compliance with the standards of WAC 246-247-040, and the status of any corrective actions necessary to achieve compliance with the requirements of this chapter. Facilities with licensed emission units that also hold a radioactive materials license issued by the department shall submit this information along with their radioactive material license renewal submittal. If the department is unable to renew a radioactive air emissions license before its expiration date, the existing license, with all of its requirements and limitations, remains in force until the department either renews or revokes the license.

(10) For commercial nuclear power plants or any other thermal energy facility subject to chapter 80.50 RCW and to the requirements of this chapter, the radioactive air emissions

license and amendments thereto shall be issued pursuant to a memorandum of agreement between the energy facility site evaluation council (EFSEC) and the department.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-060, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-060, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-060 (Order 2671), § 402-80-065, filed 8/17/88.]

WAC 246-247-065 Fees. (1) All facilities under the authority of this chapter shall submit fees in accordance with WAC 246-254-160.

(2) Those facilities required by WAC 246-254-160(2) to submit an application fee, shall submit the fee with the application.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-065, filed 3/4/94, effective 4/4/94.]

WAC 246-247-075 Monitoring, testing and quality assurance. (1) All radioactive air emissions monitoring, testing, and quality assurance requirements of 40 CFR 61, Subparts H and I published in the *Federal Register* on December 15, 1989, are adopted by reference, as applicable as specified by the referenced subparts.

(2) Equipment and procedures used for the continuous monitoring of radioactive air emissions shall conform, as applicable, to the guidance contained in ANSI N13.1, ANSI N42.18, ANSI N323, ANSI N317, reference methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17 of 40 CFR Part 60, Appendix A, 40 CFR Part 52, Appendix E, and any other methods approved by the department.

(3) The operator of an emission unit with a potential-to-emit of less than 0.1 mrem/yr TEDE to the MEI may estimate those radionuclide emissions, in lieu of monitoring, in accordance with 40 CFR 61 Appendix D, or other procedure approved by the department. The department may require periodic confirmatory measurements (e.g., grab samples) during routine operations to verify the low emissions. Methods to implement periodic confirmatory monitoring shall be approved by the department.

(4) The department may allow a facility to use alternative monitoring procedures or methods if continuous monitoring is not a feasible or reasonable requirement.

(5) The following types of facilities shall determine radionuclide emissions in accordance with either a methodology referenced in subsections (1) through (4) of this section or the respective document referenced below:

(a) Nuclear power reactors licensed by the NRC: Offsite Dose Calculation Manual;

(b) Fuel fabrication plants licensed by the NRC: NRC's Regulatory Guide 4.16, dated December 1985;

(c) Uranium mills that are processing material: NRC's Regulatory Guide 4.14, dated April 1980.

(6) Licensed facilities shall conduct and document a quality assurance program. Except for those types of facilities specified in subsection (5) of this section, the quality assurance program shall be compatible with applicable national standards such as ANSI/ASME NQA-1-1988, ANSI/ASME NQA-2-1986, QAMS-004, and QAMS-005.

(7) Those types of facilities specified in subsection (5) of this section shall conduct and document a quality assurance program compatible with either the applicable national standards referenced in subsection (6) of this section or the NRC's Regulatory Guide 4.15, dated February 1979.

(8) Facilities shall monitor nonpoint and fugitive emissions of radioactive material.

(9) The department may conduct an environmental surveillance program to ensure that radiation doses to the public from emission units are in compliance with applicable standards. The department may require the operator of any emission unit to conduct stack sampling, ambient air monitoring, or other testing as necessary to demonstrate compliance with the standards in WAC 246-247-040.

(10) The department may require the owner or operator of an emission unit to make provision, at existing emission unit sampling stations, for the department to take split or collocated samples of the emissions.

(11) The planning for any proposed new construction or significant modification of the emission unit must address accidental releases with a probability of occurrence during the expected life of the emission unit of greater than one percent.

(12) All facilities must be able to demonstrate that appropriate supervisors and workers are adequately trained in the use and maintenance of emission control and monitoring systems, and in the performance of associated test and emergency response procedures.

(13) All facilities must be able to demonstrate the reliability and accuracy of the radioactive air emissions monitoring data.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-075, filed 3/4/94, effective 4/4/94.]

WAC 246-247-080 Inspections, reporting, and recordkeeping. (1) The department reserves the right to inspect and audit all construction activities, equipment, operations, documents, data, and other records related to compliance with the requirements of this chapter. The department may require a demonstration of ALARACT at any time.

(2) All reporting and recordkeeping requirements of 40 CFR 61, Subparts H and I published in the *Federal Register* on December 15, 1989, are adopted by reference, as applicable as specified by the referenced subparts.

(3) The facility shall annually submit to the department the information requirements adopted in subsection (2) of this section, as applicable, along with the following additional information, as applicable:

(a) The results of emission measurements for those emission units subject only to periodic confirmatory measurements;

(b) Wind rose or joint frequency table;

(c) Annual average ambient temperature;

(d) Annual average emission unit gas temperature, if available;

(e) Annual total rainfall;

(f) Annual average emission unit flow rate and total volume of air released during the calendar year.

If this additional information is available in another annual report, the facility may instead provide a copy of that

[Title 246 WAC—p. 410]

report along with the information requirements in this subsection. Annual reports are due by June 30 for the previous calendar year's operations.

(4) Any report or application that contains proprietary or procurement-sensitive information shall be submitted to the department with those portions so designated. The department shall hold this information confidential, unless required to release the information pursuant to laws, regulations, or court order.

(5) The facility shall notify the department within twenty-four hours of any shutdown, or of any transient abnormal condition lasting more than four hours or other change in facility operations which, if allowed to persist, would result in emissions of radioactive material in excess of applicable standards or license requirements. If requested by the department, the facility shall submit a written report within ten days including known causes, corrective actions taken, and any preventive measures taken or planned to minimize or eliminate the chance of recurrence.

(6) The facility shall file a report of closure with the department whenever operations producing emissions of radioactive material are permanently ceased at any emission unit (except temporary emission units) regulated under this chapter. The closure report shall indicate whether, despite cessation of operations, there is still a potential for radioactive air emissions and a need for an active or passive ventilation system with emission control and/or monitoring devices. If decommissioning is planned and will constitute a modification, a NOC is required, as applicable, in accordance with WAC 246-247-060.

(7) The facility shall maintain a log for each emission unit that has received categorical approval under WAC 246-247-060(8). The log shall contain records of important operations parameters including the date, location, and duration of the release, measured or calculated radionuclide concentrations, the type of emissions (liquid, gaseous, solid), and the type of emission control and monitoring equipment.

(8) The facility shall maintain readily retrievable storage areas for all records and documents related to, and which may help establish compliance with, the requirements of this chapter. The facility shall keep these records available for department inspection for at least five years.

(9) The facility shall ensure all emission units are fully accessible to department inspectors. In the event the hazards associated with accessibility to a unit require training and/or restrictions or requirements for entry, the facility owner or operator shall inform the department, prior to arrival, of those restrictions or requirements. The owner or operator shall be responsible for providing the necessary training, escorts, and support services to allow the department to inspect the facility.

(10) The facility shall make available, in a timely manner, all documents requested by the department for review. The facility shall allow the department to review documents in advance of an inspection. The facility shall allow access to classified documents by representatives of the department with the appropriate security clearance and a demonstrable need-to-know.

(11) The facility shall respond in writing in a timely manner, or within a time limit set by the department, to

(2003 Ed.)

inspection results which require the facility to implement corrective actions or any other actions so directed by the department.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-080, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-080, filed 12/11/86.]

WAC 246-247-085 Compliance determination for existing emission units and facilities. (1) All procedures for determining compliance with the dose equivalent standards of 40 CFR 61, Subparts H and I published in the *Federal Register* on December 15, 1989, are adopted by reference, as applicable as specified by the referenced subparts.

(2) Facilities subject to 40 CFR 61 shall use computer codes or procedures approved by the EPA to determine the TEDE to the MEI; all other facilities shall use computer codes or procedures approved by the department.

(3) The determination of compliance with the dose equivalent standard of WAC 246-247-040 shall include all radioactive air emissions resulting from routine and nonroutine operations for the past calendar year.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-085, filed 3/4/94, effective 4/4/94.]

WAC 246-247-100 Enforcement actions. (1) In accordance with RCW 70.94.422, the department may take any of the following actions to enforce compliance with the provisions of this chapter:

(a) Notice of violation and compliance order (RCW 70.94.332).

(b) Restraining order or temporary or permanent injunction (RCW 70.94.425; also RCW 70.98.140).

(c) Penalty: Fine and/or imprisonment (RCW 70.94.430).

(d) Civil penalty: Up to ten thousand dollars for each day of continued noncompliance (RCW 70.94.431 (1) through (7)).

(e) Assurance of discontinuance (RCW 70.94.435).

(2) The department, in accordance with RCW 70.98.050 (4)(l), may issue subpoenas in order to compel attendance of witnesses and/or production of records or documents in connection with any adjudicative or other administrative proceeding.

(3) The department, in accordance with RCW 70.98.160, may impound sources of ionizing radiation.

(4) The secretary of the department, in accordance with RCW 43.70.190, is authorized to bring an action to prohibit a violation or a threatened violation of any department rules or regulation, or to bring any legal proceeding authorized by law to a county superior court.

(5) Any party, against which an enforcement action is brought by the department, has the right to submit an application for the adjudicative process in accordance with chapter 246-10 WAC and chapter 34.05 RCW.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-100, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-247-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-80-100, filed 12/11/86.]

(2003 Ed.)

WAC 246-247-110 Appendix A—Application information requirements. (1) Name and address of the facility, and location (latitude and longitude) of the emission unit(s).

(2) Name, title, address, and phone number of the responsible manager.

(3) Identify the type of proposed action for which this application is submitted:

(a) Construction of new emission unit(s);

(b) Modification of existing emission unit(s); identify whether this is a significant modification;

(c) Modification of existing unit(s), unregistered.

(4) If this project is subject to the requirements of the State Environmental Policy Act (SEPA) contained in chapter 197-11 WAC, provide the name of the lead agency, lead agency contact person, and their phone number.

(5) Describe the chemical and physical processes upstream of the emission unit(s).

(6) Describe the existing and proposed (as applicable) abatement technology. Describe the basis for the use of the proposed system. Include expected efficiency of each control device, and the annual average volumetric flow rate(s) in meters³/sec for the emission unit(s).

(7) Provide conceptual drawings showing all applicable control technology components from the point of entry of radionuclides into the vapor space to release to the environment.

(8) Identify each radionuclide that could contribute greater than ten percent of the potential-to-emit TEDE to the MEI, or greater than 0.1 mrem/yr potential-to-emit TEDE to the MEI.

(9) Describe the effluent monitoring system for the proposed control system. Describe each piece of monitoring equipment and its monitoring capability, including detection limits, for each radionuclide that could contribute greater than ten percent of the potential-to-emit TEDE to the MEI, or greater than 0.1 mrem/yr potential-to-emit TEDE to the MEI, or greater than twenty-five percent of the TEDE to the MEI, after controls. Describe the method for monitoring or calculating those radionuclide emissions. Describe the method with detail sufficient to demonstrate compliance with the applicable requirements.

(10) Indicate the annual possession quantity for each radionuclide.

(11) Indicate the physical form of each radionuclide in inventory: Solid, particulate solids, liquid, or gas.

(12) Indicate the release form of each radionuclide in inventory: Particulate solids, vapor, or gas. Give the chemical form and ICRP 30 solubility class, if known.

(13) Release rates.

(a) New emission unit(s): Give predicted release rates without any emissions control equipment (the potential-to-emit) and with the proposed control equipment using the efficiencies described in subsection (6) of this section.

(b) Modified emission unit(s): Give predicted release rates without any emissions control equipment (the potential-to-emit) and with the existing and proposed control equipment using the efficiencies described in subsection (6) of this section. Provide the latest year's emissions data or emissions estimates.

[Title 246 WAC—p. 411]

In all cases, indicate whether the emission unit is operating in a batch or continuous mode.

(14) Identify the MEI by distance and direction from the emission unit(s). The MEI is determined by considering distance, windrose data, presence of vegetable gardens, and meat or milk producing animals at unrestricted areas surrounding the emission unit.

(15) Calculate the TEDE to the MEI using an approved procedure (see WAC 246-247-085). For each radionuclide identified in subsection (8) of this section, determine the TEDE to the MEI for existing and proposed emission controls, and without any emission controls (the potential-to-emit) using the release rates from subsection (13) of this section. Provide all input data used in the calculations.

(16) Provide cost factors for construction, operation, and maintenance of the proposed control technology components and system, if a BARCT or ALARACT demonstration is not submitted with the NOC.

(17) Provide an estimate of the lifetime for the facility process with the emission rates provided in this application.

(18) Indicate which of the following control technology standards have been considered and will be complied with in the design and operation of the emission unit(s) described in this application:

ASME/ANSI AG-1, Code on Nuclear Air and Gas Treatment (where there are conflicts in standards with the other listed references, this standard shall take precedence)

ASME/ANSI N509, Nuclear Power Plant Air-Cleaning Units and Components

ASME/ANSI N510, Testing of Nuclear Air Treatment Systems

ANSI/ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities

40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17

ANSI N13.1, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities

For each standard not so indicated, give reason(s) to support adequacy of the design and operation of the emission unit(s) as proposed.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-110, filed 3/4/94, effective 4/4/94.]

WAC 246-247-120 Appendix B—BARCT compliance demonstration. Purpose. A BARCT demonstration is used to choose control technologies for the mitigation of emissions of radioactive material from new emission units or significant modifications to emission units. The bases for the BARCT demonstration requirements are the BARCT standard given in WAC 246-247-040, and the definition of BARCT given in WAC 246-247-030. This procedure incorporates certain implementing criteria that enable the department to evaluate a facility's compliance with the BARCT standard. It is the applicant's responsibility to demonstrate the effectiveness of their BARCT determination to the department. The facility should contact the department at the conceptual design phase for guidance on the BARCT demonstration requirements. The department may adjust this demon-

stration procedure on a case-by-case basis, as needed, to ensure compliance with the substantive standard.

Scope. The BARCT demonstration includes the abatement technology and indication devices that demonstrate the effectiveness of the abatement technology from entry of radionuclides into the ventilated vapor space to release to the environment. The applicant shall evaluate all available control technologies that can reduce the level of radionuclide emissions.

Technology Standards. The BARCT demonstration and the emission unit design and construction must meet, as applicable, the technology standards shown below if the unit's potential-to-emit exceeds 0.1 mrem/yr TEDE to the MEI. If the potential-to-emit is below this value, the standards must be met only to the extent justified by a cost/benefit evaluation.

ASME/ANSI AG-1, Code on Nuclear Air and Gas Treatment (where there are conflicts in standards with the other listed references, this standard shall take precedence)

ASME/ANSI N509, Nuclear Power Plant Air-Cleaning Units and Components

ASME/ANSI N510, Testing of Nuclear Air Treatment Systems

ANSI/ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities

40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17

ANSI N13.1, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities

The following standards and references are recommended as guidance only:

ANSI/ASME NQA-2, Quality Assurance Requirements for Nuclear Facilities

ANSI N42.18, Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents

ERDA 76-21, Nuclear Air Cleaning Handbook

ACGIH 1988, Industrial Ventilation, A Manual of Recommended Practice, 20th ed., American Conference of Governmental Industrial Hygienists

BARCT Demonstration Procedure.

Step 1. Define facility process variables. Describe the physical and chemical process. Include the potential radionuclide release rates (by isotope, in units of curies/year), process variables (such as flow rate, temperature, humidity, chemical composition), and other technical considerations. Base the radionuclide release rate on the potential-to-emit.

Radionuclides selected for consideration in the BARCT demonstration shall include those which contribute more than ten percent of the potential TEDE to the MEI or more than 0.1 mrem/yr, and any others which the department determines are necessary.

Step 2. Gather information on all available control technologies. Search for all available technologies that can reduce the emissions levels for the radionuclides selected in Step 1. Sources of information shall include previous BARCT demonstrations, regulatory authorities, industry or regulatory agency data bases, literature searches, information from technology vendors, research and development reports,

and any other means necessary to identify all available technologies. "Available technology" includes any technology that is commercially available. Recently completed searches may be used with department approval.

Step 3. Determine technical feasibility. Determine technical feasibility by evaluating vendor specifications for available control technologies identified in Step 2 with respect to the process variables identified in Step 1. Evaluate combinations of abatement technology and control devices by component, and the system as a whole.

If a control technology has poor safety, reliability, or control effectiveness as achieved in practice under the proposed process conditions, or the technology is not applicable to the emission unit under consideration, the technology may be eliminated with supporting documentation of the technical infeasibility.

Step 4. List all feasible control technologies in order of effectiveness. Evaluate feasible control technologies for efficiency (effectiveness) in reducing the TEDE to the MEI. List them in order, with the most effective first. If the most effective feasible technology is proposed as BARCT, the demonstration is complete at this step.

Step 5. Evaluate the environmental, energy, and economic impacts. Evaluate each control technology in succession, beginning with the most effective. Present an objective evaluation considering both beneficial and adverse impacts. Quantify the data where possible. Impact cost and effectiveness evaluations are incremental and include only that portion of the facility which comes under the authority of this chapter. Evaluate at least the following impacts:

Environmental impact - Determine the incremental environmental impact, both beneficial and adverse. Evaluate the beneficial impact of reduction in the TEDE to the surrounding population or, at a minimum, to the MEI due to the abatement of radioactive air emissions. Consider the adverse impacts from waste generation (radioactive and nonradioactive, air and nonair), disposal and stabilization, construction of control equipment, and the health and safety to both radiation workers and the general public.

Energy impact - Determine the incremental energy impact. Include the impact of any resulting need for new services such as energy distribution systems.

Economic impact - Determine the incremental economic impact. Determine capital and expense costs including design, development, procurement, construction, operation, maintenance, taxes, waste disposal, and any other applicable financial components. Base all costs on the expected lifetime of the emission unit and reduce to an annualized cost for evaluation and comparison.

The adverse economic impact compared to the beneficial impact, including reduction in TEDE to the surrounding population or the MEI, is a measure of the cost versus benefit for the control technology evaluated.

The most effective technology may be eliminated from consideration if the applicant can demonstrate to the department's satisfaction that the technology has unacceptable impacts. State clearly the basis for this conclusion and proceed to the next most effective control technology. If the next most effective technology is proposed as BARCT, the dem-

onstration is complete; otherwise, evaluate the control technology for impacts in accordance with this step.

If the control technology cannot be eliminated on the basis of its impacts, it is proposed as BARCT.

Reporting. Prepare a BARCT compliance demonstration report for department review. Provide sufficient information such that the department can validate essential results. If no control technology is feasible, and/or emissions are unacceptable, the department reserves the right to prohibit the construction and operation of the emission unit(s).

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-120, filed 3/4/94, effective 4/4/94.]

WAC 246-247-130 Appendix C—ALARACT compliance demonstration. Purpose. An ALARACT demonstration is used for inspection or audit purposes, and to demonstrate compliance with the substantive ALARACT technology standard as required by this chapter. An ALARACT demonstration is used to evaluate the adequacy of control technology on existing emission units and to choose control technologies for proposed nonsignificant modifications of emission units. The bases for the ALARACT demonstration requirements are the ALARACT standards given in WAC 246-247-040 and the definition of ALARACT given in WAC 246-247-030. It is the applicant's responsibility to demonstrate the effectiveness of their ALARACT determination to the department. The department may adjust this demonstration procedure on a case-by-case basis, as needed, to ensure compliance with the substantive standard.

Scope. The ALARACT demonstration includes the abatement technology and indication devices, from entry of radionuclides into the ventilated vapor space to release to the environment. The facility shall evaluate the existing control system in relation to applicable technology standards, and other control technologies that have been successfully operated for similar applications.

Technology Standards. The ALARACT demonstration and the emission unit design and construction must meet, as applicable, the technology standards shown below if the unit's potential-to-emit exceeds 0.1 mrem/yr TEDE to the MEI. If the potential-to-emit is below this value, the standards must be met only to the extent justified by a cost/benefit evaluation.

ASME/ANSI AG-1, Code on Nuclear Air and Gas Treatment (where there are conflicts in standards with the other listed references, this standard shall take precedence)

ASME/ANSI N509, Nuclear Power Plant Air-Cleaning Units and Components

ASME/ANSI N510, Testing of Nuclear Air Treatment Systems

ANSI/ASME NQA-1, Quality Assurance Program Requirements for Nuclear Facilities

40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 4, 5, and 17

ANSI N13.1, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities

The following standards and references are recommended as guidance only:

ANSI/ASME NQA-2, Quality Assurance Requirements for Nuclear Facilities

ANSI N42.18, Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents

ERDA 76-21, Nuclear Air Cleaning Handbook

ACGIH 1988, Industrial Ventilation, A Manual of Recommended Practice, 20th ed., American Conference of Governmental Industrial Hygienists

ALARA References. "Health Physics Manual of Good Practice for Reducing Radiation Exposure to Levels that are As Low As Reasonably Achievable (ALARA)", PNL-6577, June, 1988; prepared for the USDOE by Pacific Northwest Laboratories (Battelle Memorial Institute).

"A Guide to Reducing Radiation Exposure to As Low As Reasonably Achievable (ALARA)", DOE/EV/1830-T5, April, 1980, R.L. Kathren and J.M. Selby; prepared for the USDOE by Pacific Northwest Laboratories (Battelle Memorial Institute).

"A Practical Method of Performing Cost-Benefit Analysis of Occupational and Environmental Protective Measures", WHC-SA-0484-FP, March, 1989, G.F. Boothe and D.E. Webb; prepared for the USDOE by Westinghouse Hanford Company.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-247-130, filed 3/4/94, effective 4/4/94.]

Chapter 246-249 WAC

RADIOACTIVE WASTE—USE OF THE COMMERCIAL DISPOSAL SITE

WAC

246-249-001	Purpose and scope.
246-249-010	Definitions.
246-249-020	Site use permit.
246-249-030	Waste shipment certification.
246-249-040	Classification of radioactive waste for near-surface disposal.
246-249-050	Acceptable radioactive waste forms and packaging.
246-249-060	Labeling.
246-249-070	Variances.
246-249-080	Naturally occurring and accelerator produced radioactive material (NARM), excluding source material.
246-249-090	Transfer for disposal and manifests.

WAC 246-249-001 Purpose and scope. This chapter provides rules governing generators and brokers of low-level radioactive waste seeking to dispose of such waste at any commercial disposal facility in the state of Washington. These rules are in addition to applicable requirements of the United States Nuclear Regulatory Commission (NRC), the United States Department of Transportation (DOT), and other requirements of Title 246 WAC, the requirements of the department of ecology, Title 173 WAC, and conditions of the license issued to the disposal site operator(s).

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-001, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-010, filed 12/11/86.]

WAC 246-249-010 Definitions. As used in this chapter, the following definitions apply:

[Title 246 WAC—p. 414]

(1) "Low-level radioactive waste" has the same meaning as in the Low-Level Radioactive Waste Policy Amendments Act of 1985, Public Law 99-240, that is, radioactive waste not classified as high-level radioactive waste, spent nuclear fuel, or by-product material as defined in section 11e.(2) of the Atomic Energy Act.

(2) "Broker" means a person who performs one or more of the following functions for a low-level radioactive waste generator:

(a) Arranges for transportation of the low-level radioactive waste;

(b) Collects and/or consolidates shipments of such low-level radioactive waste (waste collector);

(c) Processes such low-level radioactive waste in some manner; provided it shall not mean a carrier whose sole function is to transport such low-level radioactive waste (waste processor).

(3) "Chelating agent" means amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxy-carboxylic acids, and polycarboxylic acids (e.g., citric acid, carboic acid, and glucinic acid).

(4) "Chemical description" means a description of the principal chemical characteristics of a low-level radioactive waste.

(5) "Computer-readable medium" means that the regulatory agency's computer can transfer the information from the medium into its memory.

(6) "Consignee" means the designated receiver of the shipment of low-level radioactive waste.

(7) "Decontamination facility" means a facility operating under a commission or agreement state license whose principal purpose is decontamination of equipment or materials to accomplish recycle, reuse, or other waste management objectives, and, for purposes of this section, is not considered to be a consignee for LLW shipments.

(8) "Disposal container" means a container principally used to confine low-level radioactive waste during disposal operations at a land disposal facility (also see "high integrity container"). Note that for some shipments, the disposal container may be the transport package.

(9) "EPA identification number" means the number received by a transporter following application to the administrator of EPA as required by 40 CFR Part 263.

(10) "Generator" means a licensee operating under a commission or agreement state license who:

(a) Is a waste generator as defined in this part; or

(b) Is the licensee to whom waste can be attributed within the context of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (e.g., waste generated as a result of decontamination or recycle activities).

(11) "High integrity container (HIC)" means a container commonly designed to meet the structural stability requirements of this chapter, and to meet department of transportation requirements for a Type A package.

(12) "Land disposal facility" means the land, buildings, and equipment which are intended to be used for the disposal of radioactive wastes. For the purposes of this chapter, a land disposal facility does not include a geologic repository.

(13) "Motor vehicle" means any vehicle, truck, tractor, semi-trailer, or trailer (or any permitted combination of

these), driven by mechanical power and used upon the highways to carry property.

(14) "Motor common carrier" means a person holding itself out to the general public to provide motor vehicle transportation for compensation over regular or irregular routes, or both.

(15) "Motor contract carrier" means a person other than a common carrier providing motor vehicle transportation of property for compensation under continuing agreements with one or more persons.

(16) "Motor private carrier" means a person, other than a motor carrier, transporting property by motor vehicle when the person is the owner, lessee, or bailee of the property being transported; and the property is being transported for sale, lease, rent, or bailment, or to further a commercial enterprise.

(17) "Motor carrier" means a motor common carrier and a motor contract carrier.

(18) "NRC Forms 540, 540A, 541, 541A, 542, and 542A" are official NRC Forms referenced in this section. Licensees need not use originals of these NRC Forms as long as any substitute forms are equivalent to the original documentation in respect to content, clarity, size, and location of information. Upon agreement between the shipper and consignee, NRC Forms 541 (and 541A) and NRC Forms 542 (and 542A) may be completed, transmitted, and stored in electronic media. The electronic media must have the capability for producing legible, accurate, and complete records in the format of the uniform manifest.

(19) "Package" means the assembly of components necessary to ensure compliance with the packaging requirements of DOT regulations, together with its radioactive contents, as presented for transport.

(20) "Physical description" means the items called for on NRC Form 541 to describe a low-level radioactive waste.

(21) "Residual waste" means low-level radioactive waste resulting from processing or decontamination activities that cannot be easily separated into distinct batches attributable to specific waste generators. This waste is attributable to the processor or decontamination facility, as applicable.

(22) "Shipper" means the licensed entity (i.e., the waste generator, waste collector, or waste processor) who offers low-level radioactive waste for transportation, typically consigning this type of waste to a licensed waste collector, waste processor, or land disposal facility operator.

(23) "Shipment" means the total low-level radioactive waste material transported in one motor vehicle.

(24) "Shipping paper" means NRC Form 540 and, if required, NRC Form 540A which includes the information required by DOT in 49 CFR Part 172.

(25) "Transuranic waste" means material contaminated with elements that have an atomic number greater than 92.

(26) "Uniform Low-Level Radioactive Waste Manifest or uniform manifest" means the combination of NRC Forms 540, 541, and, if necessary, 542, and their respective continuation sheets as needed, or equivalent.

(27) "Waste collector" means an entity, operating under a commission or agreement state license, whose principal purpose is to collect and consolidate waste generated by others, and to transfer this waste, without processing or repack-

aging the collected waste, to another licensed waste collector, licensed waste processor, or licensed land disposal facility.

(28) "Waste description" means the physical, chemical and radiological description of a low-level radioactive waste as called for on NRC Form 541.

(29) "Waste generator" means an entity, operating under a commission or agreement state license, who:

(a) Possesses any material or component that contains radioactivity or is radioactively contaminated for which the licensee foresees no further use; and

(b) Transfers this material or component to a licensed land disposal facility or to a licensed waste collector or processor for handling or treatment prior to disposal.

A licensee performing processing or decontamination services may be a "waste generator" if the transfer of low-level radioactive waste from its facility is defined as "residual waste."

(30) "Waste processor" means an entity, operating under a commission or agreement state license, whose principal purpose is to process, repackage, or otherwise treat low-level radioactive material or waste generated by others prior to eventual transfer of waste to a licensed low-level radioactive waste land disposal facility.

(31) "Waste type" means a waste within a disposal container having a unique physical description (i.e., a specific waste descriptor code or description; or a waste sorbed on or solidified or stabilized in a specifically defined media).

[Statutory Authority: RCW 70.98.050 and 70.98.080. 98-09-117, § 246-249-010, filed 4/22/98, effective 5/23/98; 91-16-109 (Order 187), § 246-249-010, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-020, filed 12/11/86.]

WAC 246-249-020 Site use permit. (1) Each generator and each broker of radioactive waste shall possess a valid and unencumbered site use permit prior to the shipment of such waste to, or the disposal of such waste at any commercial disposal facility in the state of Washington and shall have complied with the permit requirements of the department of ecology.

(2) Suspension or revocation of permit.

(a) The failure of one or more packages in a shipment of waste to be in compliance with one or more of the requirements of the license issued to the commercial low-level radioactive waste disposal site operator, Title 246 WAC, the United States Nuclear Regulatory Commission, the United States Department of Transportation, or conditions of the disposal site operator's radioactive materials license may cause the suspension of the site use permit of the responsible generator and/or broker.

(b) The site use permit of a generator and/or broker may be suspended or revoked if any other licensed commercial low-level radioactive waste disposal site in the United States has refused to accept waste from that generator or broker.

(c) A suspended site use permit may be reinstated provided:

(i) The generator and/or broker submits a quality assurance procedure designed to correct previous problems and to achieve and maintain compliance with all applicable requirements; and

(ii) A point-of-origin inspection by the state of Washington, of the generator's and/or broker's waste management activities, indicates compliance with all applicable requirements and regulations.

(3) Brokered shipments.

(a) It is the broker's responsibility to assure that a generator of waste has a valid unencumbered site use permit prior to shipment of waste for disposal.

(b) A broker, as consignor, assumes coresponsibility with a generator for all aspects of that generator's waste until it can be documented to the department's satisfaction that the broker's sphere of responsibility was limited.

[Statutory Authority: Chapter 70.98 RCW, 95-13-094, § 246-249-020, filed 6/21/95, effective 7/22/95. Statutory Authority: RCW 70.98.050 and 70.98.080, 91-16-109 (Order 187), § 246-249-020, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-249-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-62-030, filed 12/11/86.]

WAC 246-249-030 Waste shipment certification. (1)

A low-level radioactive waste shipment certification, Form RHF-31, must accompany each shipment of radioactive waste to a licensed low-level radioactive waste burial site. All three sections of the form must be completed. The certification shall be submitted at the disposal site to the department of health or its designee, and must be judged to be properly executed prior to the acceptance of the waste by the site operator. If a broker is involved, the broker's and carrier's sections must bear original signatures. The generator's signature need not be an original signature. If a broker is acting as the processor and/or packager of the waste, the broker may act as the agent of the generator and may sign the certification statement for the generator, provided the name and site use permit number of the original generator are identified. If no broker is involved, the generator shall so signify by entry in the broker's section of the form that no broker was involved, e.g., "no broker," and the generator and carrier's section must bear original signatures.

(2) In the case of brokered shipments from more than a single generator, information on each generator's certification shall include data clearly identifying, without reference to other documentation, each package transferred from that generator to the broker. The data shall be compatible with package identifications on the shipment manifest (RSR) from the broker, and with identification markings on the packages.

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-16-109 (Order 187), § 246-249-030, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-249-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-62-040, filed 12/11/86.]

WAC 246-249-040 Classification of radioactive waste for near-surface disposal. (1) Considerations.

Determination of the classification of waste involves two considerations. First, consideration must be given to the concentration of long-lived radionuclides (and their shorter-lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radionuclides

could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure. Second, consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

(2) Classes of waste.

(a) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in WAC 246-249-050(1). If Class A waste also meets the stability requirements set forth in WAC 246-249-050(2), it is not necessary to segregate the waste for disposal.

(b) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in WAC 246-249-050.

(c) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in WAC 246-249-050.

(3) **Classification determined by long-lived radionuclides.** If the waste contains only radionuclides listed in Table 1, classification shall be determined as follows:

(a) If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A.

(b) If the concentration exceeds 0.1 times the value in Table 1, but does not exceed the value in Table 1, the waste is Class C.

(c) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for near-surface disposal.

(d) For waste containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined by the sum of fractions rule described in subsection (7) of this section.

Table 1

Radionuclide	Concentration Curies/Cubic Meter
C-14	8
C-14 in activated metal	80
Ni-59 in activated metal	220
Nb-94 in activated metal	0.2
Tc-99	3
I-129	0.08
Alpha emitting transuranic radionuclides with half-life greater than five years	100 ¹
Pu-241	3,500 ¹
Cm-242	20,000 ¹
Ra-22	100 ¹

¹ Units are nanocuries per gram, to convert to becquerels (Bq) per gram multiply by 37, to convert from curies to gigabecquerels (GBq) multiply by 37. Specific approval of the department is required for disposal of these radionuclides if their concentration is greater than ten percent of the Table 1 value.

(4) **Classification determined by short-lived radionuclides.** If the waste does not contain any of the radionuclides listed in Table 1, classification shall be determined based on the concentrations shown in Table 2. If the radioactive waste does not contain any radionuclides listed in either Table 1 or 2, it is Class A.

(a) If the concentration does not exceed the value of Column 1, the waste is Class A.

(b) If the concentration exceeds the value in Column 1, but does not exceed the value in Column 2, the waste is Class B.

(c) If the concentration exceeds the value in Column 2, but does not exceed the value in Column 3, the waste is Class C.

(d) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near-surface disposal.

(e) For wastes containing mixtures of the radionuclides listed in Table 2, the total concentration shall be determined by the sum of fractions rule described in subsection (7) of this section.

Table 2

Radionuclide	Concentration, Curies/ Cubic Meter		
	Column 1	Column 2	Column 3
Total of all radionuclides with less than 5-year half-life	700	(*)	(*)
H-3	40	(*)	(*)
Co-60	700	(*)	(*)
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7,000
Sr-90	0.04	150	7,000
Cs-137	1	44	4,600

(*) There are no limits established for these radionuclides in Class B or C wastes. Practical consideration such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other radionuclides in Table 2 determine the waste to be Class C independent of these radionuclides. Specific approval of the department is required prior to packaging of Class B tritium waste.

(5) **Classification determined by both long-lived and short-lived radionuclides.** If the waste contains a mixture of radionuclides, some of which are listed in Table 1, and some of which are listed in Table 2, classification shall be determined as follows:

(a) If the concentration of a radionuclide listed in Table 1 is less than 0.1 times the value listed in Table 1, the class shall be that determined by the concentration of radionuclides listed in Table 2.

(b) If the concentration of a radionuclide listed in Table 1 exceeds 0.1 times the value listed in Table 1, the waste shall be Class C, provided the concentration of radionuclides listed in Table 2 does not exceed the value shown in Column 3 of Table 2.

(6) **Classification of waste with radionuclides other than those listed in Tables 1 and 2.** If the waste does not

contain any radionuclides listed in either Table 1 or 2, it is Class A.

(7) **The sum of fractions rule for mixtures of radionuclides.** For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each radionuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits must all be taken from the same column of the same table. The sum of the fractions for the column must be less than or equal to 1.0 if the waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 50 Ci/m³ and Cs-137 in a concentration of 22 Ci/m³. Since the concentrations both exceed the values in Column 1, Table 2, they must be compared to Column 2 values. For Sr-90 fraction, 50/150 = 0.33; for Cs-137 fraction, 22/44 = 0.5; the sum of the fractions = 0.83. Since the sum is less than 1.0, the waste is Class B.

(8) **Determination of concentration in wastes.** The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate to the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurement. The concentration of a radionuclide may be averaged over the volume of the waste, or weight of the waste if the units are expressed as nanocuries per gram.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-040, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-050, filed 12/11/86.]

WAC 246-249-050 Acceptable radioactive waste forms and packaging. (1) Packaging.

(a) Wastes shall be packaged in conformance with the conditions of the license issued to the site operator to which the waste will be shipped. Where the conditions of the site license are more restrictive than the provisions of these regulations, the site license condition shall govern. As a minimum, radioactive waste must be packaged in such a manner that waste containers received at the facility do not show:

- (i) Significant deformation;
- (ii) Loss or dispersal of contents;
- (iii) An increase in the external radiation levels recorded on the manifest, within instrument tolerances; or
- (iv) Significant containment degradation due to rust or other chemical actions.

(b) Wastes shall not be packaged for disposal in cardboard or fiberboard. Wood boxes are prohibited after February 28, 1987.

(c) A process control program shall be used which validates the following:

(i) Liquid waste shall be packaged in sufficient approved absorbent material to absorb twice the volume of the liquid, solidified using an approved solidification agent, or stabilized using an approved stabilization agent.

(ii) Solid wastes containing liquid shall contain as little free-standing and noncorrosive liquid as is reasonably

achievable, but in no case shall the liquid exceed one percent of the volume.

(d) Waste shall not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water.

(e) Waste shall not contain, or be capable of generating quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged in accordance with (g) of this subsection.

(f) Pyrophoric materials contained in wastes shall be treated, prepared, and packaged to be nonflammable.

(g) Waste in gaseous form must be packaged at a pressure that does not exceed 1.5 atmospheres at 20°C. Total activity shall not exceed 100 curies (3.7×10^{12} Bqs) per container. Class A gaseous waste shall be contained within United States Department of Transportation specification cylinders. Specific approval of the department is required if the gaseous waste is Class B or C.

(h) Wastes containing hazardous, biological, pathogenic, or infectious material shall be treated to reduce the maximum extent practicable the potential hazard from the nonradiological materials. Wastes subject to regulation under Resource Conservation and Recovery Act (RCRA) are not allowed at the disposal site.

(i) Radioactive consumer products, the use and disposal of which is exempt from licensing control, may be received without regard to concentration limits of WAC 246-249-040 Table 2 provided the entire unit is received and is packaged with sufficient sorbent material so as to preclude breakage and rupture of its contents. This subsection allows the disposal of such consumer products as intact household or industrial smoke detector units containing Americium-241 foils and radium or radioactive materials incorporated into self-luminous devices and electron tubes.

(2) The following requirements are intended to provide stability of the waste. Stability is intended to ensure that the waste does not degrade and affect overall stability of the site through slumping, collapse, or other failure of the disposal unit and thereby lead to water infiltration. Stability is also a factor in limiting exposure to an inadvertent intruder, since it provides a recognizable and nondispersible waste form.

(a) Classes B, C, and A stable waste shall have structural stability. A structurally stable waste form will generally maintain its physical dimensions and its form, under the expected disposal conditions such as weight of overburden and compaction equipment, the presence of moisture, and microbial activity, and internal factors such as radiation effects and chemical changes. Structural stability can be provided by the waste form itself, processing the waste to a stable form, or placing the waste in a disposal container or structure that provides stability after disposal.

(b) Notwithstanding the provisions in subsection (1)(c) and (d) of this section, liquid waste, or waste containing liquid, shall be converted into a form that contains as little free-standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed one percent of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5 percent of the volume of the waste for waste processed to a stable form.

(c) Void spaces within the radioactive waste and between the waste and its package shall be reduced to the extent practicable. Unless specifically approved by the department, void spaces in Class A stable, Class B, and Class C waste packages shall be less than 15 percent of the total volume of the disposal package, provided the disposal package is not a high integrity container nor contains activated metals that are too large to put into high integrity containers. For Class B and Class C waste packages containing activated metals, voids shall be reduced to the extent practicable, and shall be demonstrated to be structurally stable by any of the methods discussed in (a) of this subsection.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-050, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-060, filed 12/11/86.]

WAC 246-249-060 Labeling. Each package of waste must be clearly labeled to identify whether it is Class A waste, Class B waste, or Class C waste in accordance with WAC 246-249-040. This marking is in addition to any transportation markings or labeling required by the United States Nuclear Regulatory Commission or the United States Department of Transportation and shall consist of lettering one-half inch high or greater in a durable contrasting color with the background surrounding the lettering. The classification marking shall be visible on the same side as the radioactive marking or label and in close proximity (within six inches). Waste packages marked "Radioactive," "Limited Quantity" or "Radioactive LSA" need only one classification marking whereas waste packages labeled White I, Yellow II, or Yellow III shall have classification markings in close proximity (within six inches) to each label.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-060, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-070, filed 12/11/86.]

WAC 246-249-070 Variances. It is inevitable that a small portion of wastes cannot be treated to fully comply with the waste form requirements of this chapter consistent with the ALARA philosophy of chapter 246-220 WAC. A waste disposal site operator may apply to the department for a variance provided:

(1) The variance requested is not for a continuing process or waste stream;

(2) An equivalent or greater degree of protection is provided by the proposed alternative; and

(3) All reasonable methods of complying with the existing requirement have been considered.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-070, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-080, filed 12/11/86.]

WAC 246-249-080 Naturally occurring and accelerator produced radioactive material (NARM), excluding source material. (1) In addition to requirements for a dis-

posal site use permit contained in WAC 246-249-020, single generators of radioactive wastes shall obtain the specific approval of the department prior to offering naturally occurring or accelerator produced radioactive material, wastes for disposal.

(2) Applications for specific departmental approval shall describe:

(a) The chemical processes which produce or have produced the waste;

(b) The volume of waste to be disposed; and

(c) The radionuclides in the waste.

(3) A request for specific approval may be approved if the department finds the material to be:

(a) In conformance with conditions of all licenses and permits issued to the disposal site operator; and

(b) Consistent with protection of the public health, safety and environment.

(4) Naturally occurring and accelerator produced radioactive material, excluding source material, shall be limited to a total site volume of no more than eight thousand six hundred cubic feet per calendar year, and individual generators shall be limited to an annual total volume of one thousand cubic feet per calendar year, provided that there shall be no annual site limit or individual generator volume limit for:

(a) Accelerator produced radioactive material excluding decommissioning waste; and

(b) Discrete sealed sources. For purposes of this section, sealed sources means any device containing naturally occurring radioactive material or accelerator produced radioactive material to be used as a source of radiation which has been constructed in such a manner as to prevent the escape of any radioactive material.

(5) Emergency provision. If the annual total site volume limit or an individual generator's annual total volume limit has been met, and an emergency situation occurs, single generators of NARM may seek emergency approval from the secretary to dispose of NARM excluding source materials in excess of volume limitations. The secretary may approve emergency disposal if he or she finds that an emergency exists based upon the circumstances described by the applicant, the real or potential impact on the public health and safety as determined by the department and that approval of such additional disposal is consistent with protecting the public health and safety of the citizens of the state of Washington.

(6) The department shall review subsection (4)(a) and (b) of this section, every five years, beginning five years from the effective date of this regulation, to determine if volume limits should be set.

(7) Denial by the department of a request for specific approval shall not be interpreted as an approval to dispose of naturally occurring or accelerator produced radioactive material without regard to its radioactivity.

[Statutory Authority: Chapter 70.98 RCW. 95-13-094, § 246-249-080, filed 6/21/95, effective 7/22/95. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-249-080, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-249-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-62-090, filed 12/11/86.]

(2003 Ed.)

WAC 246-249-090 Transfer for disposal and manifests. The requirements of this section are designed to control transfers of low-level radioactive waste by any waste generator, waste collector, or waste processor licensee who ships low-level waste either directly, or indirectly through a waste collector or waste processor, to a licensed low-level waste land disposal facility; establish a manifest tracking system; and supplement existing requirements concerning transfers and recordkeeping for those wastes.

(1) Effective March 1, 1998, each shipment of radioactive waste intended for disposal at a licensed land disposal facility in the state of Washington must be accompanied by a uniform low-level radioactive waste shipment manifest.

(2) Any licensee shipping radioactive waste intended for ultimate disposal at a licensed land disposal facility must document the information required on NRC's Uniform Low-Level Radioactive Waste Manifest and transfer this recorded manifest information to the intended consignee in accordance with this section.

(a) Each shipment manifest must include a certification by the waste generator as specified in this section.

(b) Each person involved in the transfer for disposal and disposal of waste, including the waste generator, waste collector, waste processor, and disposal facility operator, shall comply with the requirements specified in this section.

(c) When recording information on shipment manifests, information must be recorded in the International System of Units (SI) or in SI and units of curie, rad, rem, including multiples and subdivisions.

(3) A waste generator, collector, or processor who transports, or offers for transportation, low-level radioactive waste intended for ultimate disposal at a licensed low-level radioactive waste land disposal facility must prepare a manifest reflecting information requested on applicable NRC Forms 540 (Uniform Low-Level Radioactive Waste Manifest (Shipping Paper)) and 541 (Uniform Low-Level Radioactive Waste Manifest (Container and Waste Description)) and, if necessary, on an applicable NRC Form 542 (Uniform Low-Level Radioactive Waste Manifest (Manifest Index and Regional Compact Tabulation)). NRC Forms 540 and 540A must be completed and must physically accompany the pertinent low-level waste shipment. Upon agreement between shipper and consignee, NRC Forms 541 and 541A and 542 and 542A may be completed, transmitted, and stored in electronic media with the capability for producing legible, accurate, and complete records on the respective forms. Licensees are not required by the department to comply with the manifesting requirements of this section when they ship:

(a) LLW for processing and expect its return (i.e., for storage under their license) prior to disposal at a licensed land disposal facility;

(b) LLW that is being returned to the licensee who is the "waste generator" or "generator," as defined in this part; or

(c) Radioactively contaminated material to a "waste processor" that becomes the processor's "residual waste."

For guidance in completing these forms, refer to the instructions that accompany the forms. Copies of manifests required by this section may be legible carbon copies, photocopies, or computer printouts that reproduce the data in the format of the uniform manifest.

[Title 246 WAC—p. 419]

This section includes information requirements of the U.S. Department of Transportation, as codified in 49 CFR Part 172. Information on hazardous, medical, or other waste, required to meet Environmental Protection Agency regulations, as codified in 40 CFR Parts 259, 261 or elsewhere, is not addressed in this section, and must be provided on the required EPA forms. However, the required EPA forms must accompany the Uniform Low-Level Radioactive Waste Manifest required by this section.

(4) Information requirements.

(a) General information.

The shipper of the radioactive waste, shall provide the following information on the uniform manifest:

(i) The name, facility address, and telephone number of the licensee shipping the waste;

(ii) An explicit declaration indicating whether the shipper is acting as a waste generator, collector, processor, or a combination of these identifiers for purposes of the manifested shipment; and

(iii) The name, address, and telephone number, or the name and EPA identification number for the carrier transporting the waste.

(b) Shipment information.

The shipper of the radioactive waste shall provide the following information regarding the waste shipment on the uniform manifest:

(i) The date of the waste shipment;

(ii) The total number of packages/disposal containers;

(iii) The total disposal volume and disposal weight in the shipment;

(iv) The total radionuclide activity in the shipment;

(v) The activity of each of the radionuclides H-3, C-14, Tc-99, and I-129 contained in the shipment; and

(vi) The total masses of U-233, U-235, and plutonium in special nuclear material, and the total mass of uranium and thorium in source material.

(c) Disposal container and waste information.

The shipper of the radioactive waste shall provide the following information on the uniform manifest regarding the waste and each disposal container of waste in the shipment:

(i) An alphabetic or numeric identification that uniquely identifies each disposal container in the shipment;

(ii) A physical description of the disposal container, including the manufacturer and model of any high integrity container;

(iii) The volume displaced by the disposal container;

(iv) The gross weight of the disposal container, including the waste;

(v) For waste consigned to a disposal facility, the maximum radiation level at the surface of each disposal container;

(vi) A physical and chemical description of the waste;

(vii) The total weight percentage of chelating agent for any waste containing more than 0.1% chelating agent by weight, plus the identity of the principal chelating agent;

(viii) The approximate volume of waste within a container;

(ix) The sorbing, stabilization, or solidification media, if any, and the identity of the solidification or stabilization media vendor and brand name;

(x) The identities and activities of individual radionuclides contained in each container, the masses of U-233, U-235, and plutonium in special nuclear material, and the masses of uranium and thorium in source material. For discrete waste types (i.e., activated materials, contaminated equipment, mechanical filters, sealed source/devices, and wastes in solidification/stabilization media), the identities and activities of individual radionuclides associated with or contained on these waste types within a disposal container shall be reported;

(xi) The total radioactivity within each container; and

(xii) For wastes consigned to a disposal facility, the classification of the waste pursuant to this chapter. Waste not meeting the structural stability requirements of this chapter must be identified.

(d) Uncontainerized waste information.

The shipper of the radioactive waste shall provide the following information on the uniform manifest regarding a waste shipment delivered without a disposal container:

(i) The approximate volume and weight of the waste;

(ii) A physical and chemical description of the waste;

(iii) The total weight percentage of chelating agent if the chelating agent exceeds 0.1% by weight, plus the identity of the principal chelating agent;

(iv) For waste consigned to a disposal facility, the classification of the waste pursuant to this chapter. Waste not meeting the structural stability requirements of this chapter must be identified;

(v) The identities and activities of individual radionuclides contained in the waste, the masses of U-233, U-235, and plutonium in special nuclear material, and the masses of uranium and thorium in source material; and

(vi) For wastes consigned to a disposal facility, the maximum radiation levels at the surface of the waste.

(e) Multigenerator disposal container information.

This subsection applies to disposal containers enclosing mixtures of waste originating from different generators. (Note: The origin of the LLW resulting from a processor's activities may be attributable to one or more "generators," including "waste generators." It also applies to mixtures of wastes shipped in an uncontainerized form, for which portions of the mixture within the shipment originate from different generators.)

(i) For homogeneous mixtures of waste, such as incinerator ash, provide waste description applicable to the mixture and the volume of the waste attributed to each generator.

(ii) For heterogeneous mixtures of waste, such as the combined products from a large compactor, identify each generator contributing waste to the disposal container, and, for discrete waste types (i.e., activated materials, contaminated equipment, mechanical filters, sealed source/devices, and wastes in solidification/stabilization media), the identities and activities of individual radionuclides contained on these waste types within the disposal container. For each generator, provide the following:

(A) The volume of waste within the disposal container;

(B) A physical and chemical description of the waste, including the stabilization or solidification agent, if any;

(C) The total weight percentage of chelating agents for any disposal container containing more than 0.1% chelating

agent by weight, plus the identity of the principal chelating agent;

(D) The sorbing, solidification, or stabilization media, if any, and the identity of the stabilization media vendor and brand name, if the media is claimed to meet stability requirements in WAC 246-249-050(2); and

(E) Radionuclide identities and activities contained in the waste, the masses of U-233, U-235, and plutonium in special nuclear material, and the masses of uranium and thorium in source material if contained in the waste.

(5) Certification.

An authorized representative of the waste generator, processor, or collector shall certify by signing and dating the shipment manifest that the transported materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, the U.S. Nuclear Regulatory Commission, and the department. A collector in signing the certification is certifying that nothing has been done to the collected waste which would invalidate the waste generator's certification.

(6) Control and tracking.

(a) Any licensee who transfers radioactive waste to a land disposal facility or a licensed waste collector shall comply with the requirements in (a)(i) through (ix) of this subsection. Any licensee who transfers waste to a licensed waste processor for waste treatment or repackaging shall comply with the requirements of (a)(iv) through (ix) of this section. A licensee shall:

(i) Prepare all wastes so that the waste is classified according to WAC 246-249-040 and meets the waste characteristics requirements in WAC 246-249-050;

(ii) Label each disposal container (or transport package if potential radiation hazards preclude labeling of the individual disposal container) of waste to identify whether it is Class A waste, Class B waste, Class C waste, or greater than Class C waste, in accordance with WAC 246-249-040;

(iii) Conduct a quality assurance program to assure compliance with WAC 246-249-040 and 246-249-050 (the program must include management evaluation of audits);

(iv) Prepare the NRC Uniform Low-Level Radioactive Waste Manifest as required by this section;

(v) Forward a copy or electronically transfer the Uniform Low-Level Radioactive Waste Manifest to the intended consignee so that either receipt of the manifest precedes the LLW shipment or the manifest is delivered to the consignee with the waste at the time the waste is transferred to the consignee. Using both methods is also acceptable;

(vi) Include NRC Form 540 (and NRC Form 540A, if required) with the shipment regardless of the option chosen in (a)(v) of this subsection;

(vii) Receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540;

(viii) Retain a copy of or electronically store the Uniform Low-Level Radioactive Waste Manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by these regulations; and

(ix) For any shipments or any part of a shipment for which acknowledgement of receipt has not been received

within the times set forth in this section, conduct an investigation in accordance with (e) of this subsection.

(b) Any waste collector licensee who handles only pre-packaged waste shall:

(i) Acknowledge receipt of the waste from the shipper within one week of receipt by returning a signed copy of NRC Form 540;

(ii) Prepare a new manifest to reflect consolidated shipments that meet the requirements of this section. The waste collector shall ensure that, for each container of waste in the shipment, the manifest identifies the generator of that container of waste;

(iii) Forward a copy or electronically transfer the Uniform Low-Level Radioactive Waste Manifest to the intended consignee so that either receipt of the manifest precedes the LLW shipment, or the manifest is delivered to the consignee with the waste at the time the waste is transferred to the consignee. Using both methods is also acceptable;

(iv) Include NRC Form 540 (and NRC Form 540A, if required) with the shipment regardless of the option chosen in (b)(iii) of this subsection;

(v) Receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540;

(vi) Retain a copy of or electronically store the Uniform Low-Level Radioactive Waste Manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by these regulations;

(vii) For any shipments or any part of a shipment for which acknowledgement of receipt has not been received within the times set forth in this section, conduct an investigation in accordance with this section; and

(viii) Notify the shipper and the department when any shipment, or part of a shipment, has not arrived within sixty days after receipt of an advance manifest, unless notified by the shipper that the shipment has been canceled.

(c) Any licensed waste processor who treats or repackages waste shall:

(i) Acknowledge receipt of the waste from the shipper within one week of receipt by returning a signed copy of NRC Form 540;

(ii) Prepare a new manifest that meets the requirements of this section. Preparation of the new manifest reflects that the processor is responsible for meeting these requirements. For each container of waste in the shipment, the manifest shall identify the waste generators, the preprocessed waste volume, and the other information as required in subsection (4)(e) of this section;

(iii) Prepare all wastes so that the waste is classified according to WAC 246-249-040 and meets the waste characteristics requirements in WAC 246-249-050;

(iv) Label each package of waste to identify whether it is Class A waste, Class B waste, or Class C waste, in accordance with WAC 246-249-040 and 246-249-060;

(v) Conduct a quality assurance program to assure compliance with WAC 246-249-040 and 246-249-050 (the program shall include management evaluation of audits);

(vi) Forward a copy or electronically transfer the Uniform Low-Level Radioactive Waste Manifest to the intended consignee so that either receipt of the manifest precedes the LLW shipment, or the manifest is delivered to the consignee

with the waste at the time the waste is transferred to the consignee. Using both methods is also acceptable;

(vii) Include NRC Form 540 (and NRC Form 540A, if required) with the shipment regardless of the option chosen in (c)(vi) of this subsection;

(viii) Receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540;

(ix) Retain a copy of or electronically store the Uniform Low-Level Radioactive Waste Manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by these regulations;

(x) For any shipment or any part of a shipment for which acknowledgement of receipt has not been received within the times set forth in this section, conduct an investigation in accordance with (e) of this subsection; and

(xi) Notify the shipper and the department when any shipment, or part of a shipment, has not arrived within sixty days after receipt of an advance manifest, unless notified by the shipper that the shipment has been canceled.

(d) The land disposal facility operator shall:

(i) Acknowledge receipt of the waste within one week of receipt by returning, as a minimum, a signed copy of NRC Form 540 to the shipper. The shipper to be notified is the licensee who last possessed the waste and transferred the waste to the operator. If any discrepancy exists between materials listed on the Uniform Low-Level Radioactive Waste Manifest and materials received, copies or electronic transfer of the affected forms must be returned indicating the discrepancy;

(ii) Maintain copies of all completed manifests and electronically store the information required by WAC 246-250-600(8) until the license is terminated; and

(iii) Notify the shipper and the department when any shipment, or part of a shipment, has not arrived within sixty days after receipt of an advance manifest, unless notified by the shipper that the shipment has been canceled.

(e) Any shipment or part of a shipment for which acknowledgement is not received within the times set forth in this section must:

(i) Be investigated by the shipper if the shipper has not received notification or receipt within twenty days after transfer; and

(ii) Be traced and reported. The investigation shall include tracing the shipment and filing a report with the department. Each licensee who conducts a trace investigation shall file a written report with the department within two weeks of completion of the investigation.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 98-09-117, § 246-249-090, filed 4/22/98, effective 5/23/98; 97-02-014, § 246-249-090, filed 12/20/96, effective 1/20/97; 91-16-109 (Order 187), § 246-249-090, filed 8/7/91, effective 9/7/91.]

Chapter 246-250 WAC

RADIOACTIVE WASTE—LICENSING LAND DISPOSAL

WAC

GENERAL PROVISIONS

246-250-001	Purpose and scope.
246-250-010	Definitions.
246-250-020	License required.

246-250-030	Content of application.
246-250-040	General information.
246-250-050	Specific technical information.
246-250-060	Technical analyses.
246-250-070	Institutional information.
246-250-080	Financial information.
246-250-090	Requirements for issuance of a license.
246-250-100	Conditions of licenses.
246-250-110	Application for renewal or closure.
246-250-120	Contents of application for site closure and stabilization.
246-250-130	Post-closure observation and maintenance.
246-250-140	Transfer of license.
246-250-150	Termination of license.
246-250-160	General requirement.
246-250-170	Protection of the general population from releases of radioactivity.
246-250-180	Protection of individuals from inadvertent intrusion.
246-250-190	Protection of individuals during operations.
246-250-200	Stability of the disposal site after closure.

TECHNICAL REQUIREMENTS FOR LAND DISPOSAL FACILITIES

246-250-300	Disposal site suitability requirements for land disposal.
246-250-320	Disposal site design for land disposal.
246-250-330	Land disposal facility operation and disposal site closure.
246-250-340	Environmental monitoring.
246-250-350	Alternative requirements for design and operations.
246-250-360	Institutional requirements.
246-250-370	Alternative requirements for waste classification and characteristics.

FINANCIAL ASSURANCES

246-250-500	Applicant qualifications and assurances.
246-250-520	Funding for disposal site closure and stabilization.
246-250-530	Financial assurances for institutional controls.

RECORDS, REPORTS, TESTS, AND INSPECTIONS

246-250-600	Maintenance of records, reports, and transfers.
246-250-620	Tests on land disposal facilities.

LAND DISPOSAL OF RADIOACTIVE WASTE

246-250-700	Agency inspections of land disposal facilities.
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GENERAL PROVISIONS

WAC 246-250-001 Purpose and scope. (1) The regulations in this chapter establish procedures, criteria, and terms and conditions upon which the department issues licenses for land disposal of low-level radioactive wastes received from other persons. (Applicability of the requirements in this chapter to department licenses for waste disposal facilities in effect on the effective date of this regulation will be determined on a case-by-case basis and implemented through terms and conditions of the license or by orders issued by the department.) The requirements of this chapter are in addition to, and not in substitution for, other applicable requirements of these regulations or other state regulations.

(2) The regulations in this chapter do not apply to disposal of tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore where the tailings or wastes result in quantities greater than 10,000 kilograms and containing more than 185 mega becquerels (five millicuries) of radium 226, or disposal of waste provided in WAC 246-221-070, 246-221-190, or 246-221-200.

(3) This chapter establishes procedural requirements and performance objectives applicable to any method of land disposal. It establishes specific technical requirements for near-surface disposal of radioactive waste which involves disposal in the uppermost portion of the earth, approximately 30 meters. Near-surface disposal includes disposal in engineered facilities which may be built totally or partially above-grade

provided that such facilities have protective earthen covers. Near-surface disposal does not include disposal facilities which are partially or fully above-grade with no protective earthen cover, which are referred to as "above-ground disposal." Burial deeper than 30 meters may also be satisfactory. Technical requirements for alternative methods may be added in the future.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 97-02-014, § 246-250-001, filed 12/20/96, effective 1/20/97. Statutory Authority: RCW 70.98.050. 94-01-073, § 246-250-001, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-001, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-010, filed 12/11/86.]

WAC 246-250-010 Definitions. As used in this chapter, the following definitions apply:

- (1) "Active maintenance" means any significant activity needed during the period of institutional control to maintain a reasonable assurance that the performance objectives of WAC 246-250-170 and 246-250-180 are met. Such active maintenance includes ongoing activities such as the pumping and treatment of water from a disposal unit or one-time measures such as replacement of a disposal unit cover. Active maintenance does not include custodial activities such as repair of fencing, repair or replacement of monitoring equipment, revegetation, minor additions to soil cover, minor repair of disposal unit covers, and general disposal site upkeep such as mowing grass.
- (2) "Buffer zone" means a portion of the disposal site that is controlled by the licensee or by the United States Department of Energy and that lies under the disposal units and between the disposal units and the boundary of the site.
- (3) "Chelating agent" means amine polycarboxylic acids, hydroxy-carboxylic acids, gluconic acid, and polycarboxylic acids.
- (4) "Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a land disposal facility. The term does not mean disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.
- (5) "Custodial agency" means an agency of the government designated to act on behalf of the government owner of the disposal site.
- (6) "Disposal" means the isolation of wastes from the biosphere inhabited by man and his food chains by emplacement in a land disposal facility.
- (7) "Disposal site" means that portion of a land disposal facility which is used for disposal of waste. It consists of disposal units and a buffer zone.
- (8) "Disposal unit" means a discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal, the unit is usually a trench.
- (9) "Engineered barrier" means a man-made structure or device that is intended to improve the land disposal facility's ability to meet the performance objectives in this chapter.
- (10) "Explosive material" means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.
- (11) "Hazardous waste" means those wastes designated as hazardous by United States Environmental Protection Agency regulations in 40 CFR Part 261.
- (12) "Hydrogeologic unit" means any soil or rock unit or zone which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.
- (13) "Inadvertent intruder" means a person who might occupy the disposal site after closure and engage in normal activities, such as agriculture, dwelling construction, or other pursuits in which an individual might be unknowingly exposed to radiation from the waste.
- (14) "Intruder barrier" means a sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder will meet the performance objectives set forth in this chapter, or engineered structures that provide equivalent protection to the inadvertent intruder.
- (15) "Land disposal facility" means the land, buildings, and equipment which are intended to be used for the disposal of wastes into the subsurface of the land. For purposes of this chapter, a land disposal facility does not include a geologic repository.
- (16) "Monitoring" means observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.
- (17) "Near-surface disposal facility" means a land disposal facility in which waste is disposed within approximately the upper thirty meters of the earth's surface.
- (18) "Pyrophoric liquid" means any liquid that ignites spontaneously in dry or moist air at or below 130°F (54.4°C).
- (19) "Pyrophoric solid" means any solid material, other than one classed as an explosive, which under normal conditions, is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.
- (20) "Site closure and stabilization" means those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that assure that the disposal site will remain stable and will not need ongoing active maintenance.
- (21) "Stability" means structural stability.
- (22) "Surveillance" means monitoring and observation of the disposal site for purposes of visual detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements.
- (23) "Waste" means those low-level radioactive wastes that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Radioactive Waste Policy Amendments Act of 1985, Public Law 99-240, that is, radioactive waste not classified as high-level radioactive waste, spent nuclear fuel, or by-product material as defined in sec-

tion 11 e.(2) of the Atomic Energy Act (uranium or thorium tailings and waste).

[Statutory Authority: RCW 70.98.050 and 70.98.080. 97-02-014, § 246-250-010, filed 12/20/96, effective 1/20/97; 91-16-109 (Order 187), § 246-250-010, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-020, filed 12/11/86.]

WAC 246-250-020 License required. (1) No person may receive, possess, or dispose of waste received from other persons at a land disposal facility unless authorized by a license issued by the department pursuant to this chapter, and chapter 246-235 WAC.

(2) Each person shall file an application with the department pursuant to chapter 246-235 WAC and obtain a license as provided in this chapter before commencement of construction of a land disposal facility. Failure to comply with this requirement may be grounds for denial of a license.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-020, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-030, filed 12/11/86.]

WAC 246-250-030 Content of application. In addition to the requirements set forth in chapter 246-235 WAC, an application to receive from others, possess, and dispose of wastes shall consist of general information, specific technical information, institutional information, and financial information as set forth in WAC 246-250-040 through 246-250-080.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-030, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-040, filed 12/11/86.]

WAC 246-250-040 General information. The general information shall include each of the following:

(1) Identity of the applicant including:

(a) The full name, address, telephone number, and description of the business or occupation of the applicant;

(b) If the applicant is a partnership, the name and address of each partner and the principal location where the partnership does business;

(c) If the applicant is a corporation or an unincorporated association, (i) the state where it is incorporated or organized and the principal location where it does business, and (ii) the names and addresses of its directors and principal officers; and

(d) If the applicant is acting as an agent or representative of another person in filing the application, all information required under this subsection must be supplied with respect to the other person.

(2) Qualifications of the applicant:

(a) The organizational structure of the applicant, both offsite and onsite, including a description of lines of authority and assignments of responsibilities, whether in the form of administrative directives, contract provisions, or otherwise;

(b) The technical qualifications, including training and experience, of the applicant and members of the applicant's staff to engage in the proposed activities. Minimum training

and experience requirements for personnel filling key positions described in (a) of this subsection must be provided.

(c) A description of the applicant's personnel training program; and

(d) The plan to maintain an adequate complement of trained personnel to carry out waste receipt, handling, and disposal operations in a safe manner.

(3) A description of:

(a) The location of the proposed disposal site;

(b) The general character of the proposed activities;

(c) The types and quantities of waste to be received, possessed, and disposed of;

(d) Plans for use of the land disposal facility for purposes other than disposal of wastes; and

(e) The proposed facilities and equipment.

(4) Proposed schedules for construction, receipt of waste, and first emplacement of waste at the proposed land disposal facility.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-050, filed 12/11/86.]

WAC 246-250-050 Specific technical information.

The specific technical information shall include the following information needed for demonstration that the performance objectives and the applicable technical requirements of this chapter will be met. The specific technical information shall be in the form of an environmental report which the department can use to independently evaluate the project under the provisions of the State Environmental Policy Act (SEPA):

(1) A description of the natural and demographic disposal site characteristics as determined by disposal site selection and characterization activities. The description shall include geologic, geochemical, geotechnical, hydrologic, ecologic, archaeologic, meteorologic, climatologic, and biotic features of the disposal site and vicinity.

(2) A description of the design features of the land disposal facility and the disposal units. For near-surface disposal, the description shall include those design features related to infiltration of water; integrity of covers for disposal units; structural stability of backfill, wastes, and covers; contact of wastes with standing water; disposal site drainage; disposal site closure and stabilization; elimination to the extent practicable of long-term disposal site maintenance; inadvertent intrusion; occupational exposures; disposal site monitoring; and adequacy of the size of the buffer zone for monitoring and potential mitigative measures.

(3) A description of the principal design criteria and their relationship to the performance objectives.

(4) A description of the design basis natural events or phenomena and their relationship to the principal design criteria.

(5) A description of codes and standards which the applicant has applied to the design and which will apply to construction of the land disposal facilities.

(6) A description of the construction and operation of the land disposal facility. The description shall include as a minimum the methods of construction of disposal units; waste emplacement; the procedures for and areas of waste segregation; types of intruder barriers; onsite traffic and drainage

systems; survey control program; methods and areas of waste storage; and methods to control surface water and groundwater access to the wastes. The description shall also include a description of the methods to be employed in the handling and disposal of wastes containing chelating agents or other nonradiological substances that might affect meeting the performance objectives of this chapter.

(7) A description of the disposal site closure plan, including those design features which are intended to facilitate disposal site closure and to eliminate the need for ongoing active maintenance.

(8) An identification of the known natural resources at the disposal site, whose exploitation could result in inadvertent intrusion into the wastes after removal of active institutional control.

(9) A description of the kind, amount, classification, and specifications of the radioactive material proposed to be received, possessed, and disposed of at the land disposal facility.

(10) A description of the quality assurance program tailored to low-level radioactive waste disposal, developed and applied by the applicant for the determination of natural disposal site characteristics and for quality assurance during the design, construction, operation, and closure of the land disposal facility and the receipt, handling, and emplacement of waste. Audits and managerial controls must be included.

(11) A description of the radiation safety program for control and monitoring of radioactive effluents to ensure compliance with the performance objective in WAC 246-250-170 and occupational radiation exposure to ensure compliance with the requirements of chapter 246-221 WAC and to control contamination of personnel, vehicles, equipment, buildings, and the disposal site. Both routine operations and accidents shall be addressed. The program description must include procedures, instrumentation, facilities, and equipment.

(12) A description of the environmental monitoring program to provide data to evaluate potential health and environmental impacts and the plan for taking corrective measures if migration is indicated.

(13) A description of the administrative procedures that the applicant will apply to control activities at the land disposal facility.

(14) A description of the facility electronic record-keeping system.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 97-02-014, § 246-250-050, filed 12/20/96, effective 1/20/97; 91-16-109 (Order 187), § 246-250-050, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-060, filed 12/11/86.]

WAC 246-250-060 Technical analyses. The specific technical information shall also include the following analyses needed to demonstrate that the performance objectives of this chapter will be met:

(1) Pathways analyzed in demonstrating protection of the general population from releases of radioactivity shall include air, soil, groundwater, surface water, plant uptake, and exhumation by burrowing animals. The analyses shall clearly identify and differentiate between the roles performed

by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate that there is reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits set forth in WAC 246-250-170.

(2) Analyses of the protection of individuals from inadvertent intrusion shall include demonstration that there is reasonable assurance the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided.

(3) Analyses of the protection of individuals during operations shall include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analyses shall provide reasonable assurance that exposures will be controlled to meet the requirements of chapter 246-221 WAC.

(4) Analyses of the long-term stability of the disposal site and the need for ongoing active maintenance after closure shall be based upon analyses of active natural processes such as erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site. The analyses shall provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-060, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-070, filed 12/11/86.]

WAC 246-250-070 Institutional information. The institutional information submitted by the applicant shall include:

(1) A certification by the federal or state agency which owns the disposal site that the federal or state agency is prepared to accept transfer of the license when the provisions of WAC 246-250-140 are met and will assume responsibility for institutional control after site closure and post-closure observation and maintenance.

(2) Where the proposed disposal site is on land not owned by the federal or state government, the applicant shall submit evidence that arrangements have been made for assumption of ownership in fee by the federal or state agency before the department issues a license.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-070, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-080, filed 12/11/86.]

WAC 246-250-080 Financial information. The financial information shall be sufficient to demonstrate that the financial qualifications of the applicant are adequate to carry out the activities for which the license is sought and meet other financial assurance requirements of this chapter.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-090, filed 12/11/86.]

WAC 246-250-090 Requirements for issuance of a license. A license for the receipt, possession, and disposal of waste containing or contaminated with radioactive material will be issued by the department upon finding that:

(1) The issuance of the license will not constitute an unreasonable risk to the health and safety of the public;

(2) The applicant is qualified by reason of training and experience to carry out the disposal operations requested in a manner that protects health and minimizes danger to life or property;

(3) The applicant's proposed disposal site, disposal design, land disposal facility operations, including equipment, facilities, and procedures, disposal site closure, and post-closure institutional control are adequate to protect the public health and safety in that they provide reasonable assurance that the general population will be protected from releases of radioactivity as specified in the performance objective in WAC 246-250-170.

(4) The applicant's proposed disposal site, disposal site design, land disposal facility operations (including equipment, facilities, and procedures), disposal site closure, and post-closure institutional control are adequate to protect the public health and safety in that they will provide reasonable assurance that individual inadvertent intruders are protected in accordance with the performance objective in WAC 246-250-180.

(5) The applicant's proposed land disposal facility operations (including equipment, facilities, and procedures), are adequate to protect the public health and safety in that they will provide reasonable assurance that the standards for radiation protection set out in chapter 246-221 WAC will be met;

(6) The applicant's proposed disposal site, disposal site design, land disposal facility operations, disposal site closure, and post-closure institutional control are adequate to protect the public health and safety in that they will provide reasonable assurance that long-term stability of the disposed waste and the disposal site will be achieved and will eliminate to the extent practicable the need for ongoing active maintenance of the disposal site following closure;

(7) The applicant's demonstration provides reasonable assurance that the applicable technical requirements of this chapter will be met;

(8) The applicant's proposal for institutional control provides reasonable assurance that such control will be provided for the length of time found necessary to ensure the findings in subsections (3) through (6) of this section and that the institutional control meets the requirements of WAC 246-250-360.

(9) The financial or surety arrangements meet the requirements of this chapter.

(10) The provisions of the State Environmental Policy Act have been met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-090, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-100, filed 12/11/86.]

WAC 246-250-100 Conditions of licenses. (1) A license issued under this chapter, or any right thereunder,

[Title 246 WAC—p. 426]

may be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, only if the department finds, after securing full information, that the transfer is in accordance with the provisions of the act and gives its consent in writing in the form of a license amendment.

(2) The licensee shall submit written statements under oath upon request of the department, at any time before termination of the license, to enable the department to determine whether the license should be modified, suspended, or revoked.

(3) The license will be terminated only on the full implementation of the final closure plan as approved by the department, including post-closure observation and maintenance.

(4) The licensee shall be subject to the provisions of the act, now or hereafter in effect, and to all rules, regulations, and orders of the department. The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, regulations, and orders issued in accordance with the terms of the act.

(5) Each person licensed by the department pursuant to the regulations in this chapter shall confine possession and use of materials to the locations and purposes authorized in the license.

(6) The licensee shall not dispose of waste until the department has inspected the land disposal facility and has found it to be in conformance with the description, design, and construction described in the application for a license.

(7) The department may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation, or order, additional requirements and conditions with respect to the licensee's receipt, possession, and disposal of waste as it deems appropriate or necessary in order to:

(a) Protect health or to minimize danger to life or property;

(b) Require reports and the keeping of records, and to provide for inspections of activities under the license that may be necessary or appropriate to effectuate the purposes of the act and regulations thereunder.

(8) The authority to dispose of wastes expires on the date stated in the license. Any expiration date on a license applies only to the above ground activities and to the authority to dispose of waste. Failure to renew the license shall not relieve the licensee of responsibility for implementing site closure, post-closure observation, and transfer of the license to the site owner.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-110, filed 12/11/86.]

WAC 246-250-110 Application for renewal or closure. (1) An application for renewal must be filed at least ninety days prior to license expiration.

(2) An application for closure under WAC 246-250-120 must be filed at least one year prior to proposed closure.

(3) Applications for renewal of a license must be filed in accordance with WAC 246-250-030 through 246-250-080. Applications for closure must be filed in accordance with

(2003 Ed.)

WAC 246-250-120. Information contained in previous applications, statements, or reports filed with the department under the license may be incorporated by reference if the references are clear, specific, and remain pertinent.

(4) In any case in which a licensee has filed an application in proper form for renewal of a license, the license shall not expire until the department has taken final action on the application for renewal.

(5) In determining whether a license will be renewed, the department will apply the criteria set forth in WAC 246-250-090.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-110, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-120, filed 12/11/86.]

WAC 246-250-120 Contents of application for site closure and stabilization. (1) Prior to final closure of the disposal site, or as otherwise directed by the department, the applicant shall submit an application to amend the license for closure. This closure application shall include a final revision and specific details of the disposal site closure plan included as part of the license application submitted under WAC 246-250-050(7) that includes each of the following:

(a) Any additional geologic, hydrologic, or other data pertinent to the long-term containment of emplaced wastes obtained during the operational period.

(b) The results of tests, experiments, or any other analyses relating to backfill of excavated areas, closure and sealing, waste migration and interaction with emplacement media, or any other tests, experiments, or analysis pertinent to the long-term containment of emplaced waste within the disposal site.

(c) Any proposed revision of plans for:

(i) Decontamination and/or dismantlement of surface facilities;

(ii) Backfilling of excavated areas; or

(iii) Stabilization of the disposal site for post-closure care.

(d) Any significant new information regarding the environmental impact of closure activities and long-term performance of the disposal site.

(2) Upon review and consideration of an application to amend the license for closure submitted in accordance with subsection (1) of this section, the department shall issue an amendment authorizing closure if there is reasonable assurance that the long-term performance objectives of this chapter will be met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-120, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-130, filed 12/11/86.]

WAC 246-250-130 Post-closure observation and maintenance. The licensee shall observe, monitor, and carry out necessary maintenance and repairs at the disposal site until the site closure is complete and the license is transferred by the department in accordance with WAC 246-250-140. Responsibility for the disposal site must be maintained by the

(2003 Ed.)

licensee for five years. A shorter or longer time period for post-closure observation and maintenance may be established and approved as part of the site closure plan, based on site-specific conditions.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-130, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-140, filed 12/11/86.]

WAC 246-250-140 Transfer of license. Following closure and the period of post-closure observation and maintenance, the licensee may apply for an amendment to transfer the license to the disposal site owner. The license shall be transferred when the department finds:

(1) That the closure of the disposal site has been made in conformance with the licensee's disposal site closure plan, as amended and approved as part of the license;

(2) That reasonable assurance has been provided by the licensee that the performance objectives of this chapter are met;

(3) That any funds and necessary records for care will be transferred to the disposal site owner;

(4) That the post-closure monitoring program is operational for implementation by the disposal site owner; and

(5) That the federal or state agency which will assume responsibility for institutional control of the disposal site is prepared to assume responsibility and ensure that the institutional requirements found necessary under WAC 246-250-090(8) will be met.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-140, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-150, filed 12/11/86.]

WAC 246-250-150 Termination of license. (1) Following any period of institutional control needed to meet the requirements found necessary under WAC 246-250-090, the licensee may apply for an amendment to terminate the license.

(2) This application will be reviewed in accordance with the provisions of chapter 246-235 WAC.

(3) A license shall be terminated only when the department finds:

(a) That the institutional control requirements found necessary under WAC 246-250-090(8) have been met;

(b) That any additional requirements resulting from new information developed during the institutional control period have been met; and

(c) That permanent monuments or markers warning against intrusion have been installed.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-150, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-160, filed 12/11/86.]

WAC 246-250-160 General requirement. Land disposal facilities shall be sited, designed, operated, closed, and controlled after closure so that reasonable assurance exists

[Title 246 WAC—p. 427]

that exposures to individuals are within the requirements established in the performance objectives in WAC 246-250-170 through 246-250-200.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-160, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-250-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-170, filed 12/11/86.]

WAC 246-250-170 Protection of the general population from releases of radioactivity. Concentrations of radioactive material which may be released to the general environment in groundwater, surface water, air, soil, plants, or animals shall not result in an annual dose exceeding an equivalent of twenty-five millirems (0.25 mSv) to the whole body, seventy-five millirems (0.75 mSv) to the thyroid, and twenty-five millirems (0.25 mSv) to any other organ of any member of the public. Reasonable effort should be made to maintain releases of radioactivity in effluents to the general environment as low as is reasonably achievable.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-180, filed 12/11/86.]

WAC 246-250-180 Protection of individuals from inadvertent intrusion. Design, operation, and closure of the land disposal facility shall ensure protection of any individual inadvertently intruding into the disposal site and occupying the site or contacting the waste at any time after active institutional controls over the disposal site are removed.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-180, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-190, filed 12/11/86.]

WAC 246-250-190 Protection of individuals during operations. After the effective date of these regulations, operations at the land disposal facility shall be conducted in compliance with the standards for radiation protection set out in chapter 246-221 WAC, except for releases of radioactivity in effluents from the land disposal facility, which shall be governed by WAC 246-250-170. Every reasonable effort should be made to maintain radiation exposures as low as is reasonably achievable.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-190, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-190, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-200, filed 12/11/86.]

WAC 246-250-200 Stability of the disposal site after closure. The disposal facility shall be sited, designed, used, operated, and closed to achieve long-term stability of the disposal site and to eliminate, to the extent practicable, the need for ongoing active maintenance of the disposal site following closure so that only surveillance, monitoring, or minor custodial care is required.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-210, filed 12/11/86.]

TECHNICAL REQUIREMENTS FOR LAND DISPOSAL FACILITIES

WAC 246-250-300 Disposal site suitability requirements for land disposal. (1) Disposal site suitability for near-surface disposal. The primary emphasis in disposal site suitability is given to isolation of wastes, and to disposal site features that ensure that the long-term performance objectives are met.

(a) The disposal site shall be capable of being characterized, modeled, analyzed, and monitored.

(b) Within the region where the facility is to be located, a disposal site should be selected so that projected population growth and future developments are not likely to affect the ability of the disposal facility to meet the performance objectives of this chapter.

(c) Areas shall be avoided having known natural resources which, if exploited, would result in failure to meet the performance objectives of this chapter.

(d) The disposal site shall be generally well drained and free of areas of flooding or frequent ponding. Waste disposal shall not take place in a one hundred-year flood plain, coastal high-hazard area or wetland, as defined in Executive Order 11988, "Flood Plain Management Guidelines."

(e) Upstream drainage areas shall be minimized to decrease the amount of runoff which could erode or inundate waste disposal units.

(f) The disposal site shall provide sufficient depth to the water table that groundwater intrusion, perennial or otherwise, into the waste will not occur. The department will consider an exception to this requirement to allow disposal below the water table if it can be conclusively shown that disposal site characteristics will result in molecular diffusion being the predominant means of radionuclide movement and the rate of movement will result in the performance objectives being met. In no case will waste disposal be permitted in the zone of fluctuation of the water table.

(g) The hydrogeologic unit used for disposal shall not discharge groundwater to the surface, except for groundwater monitoring operations.

(h) Areas shall be avoided where tectonic processes such as faulting, folding, seismic activity, or vulcanism may occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of this chapter or may preclude defensible modeling and prediction of long-term impacts.

(i) Areas shall be avoided where surface geologic processes such as mass wasting, erosion, slumping, landsliding, or weathering occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of this chapter, or may preclude defensible modeling and prediction of long-term impacts.

(j) An existing disposal site may be located where nearby facilities or activities could adversely impact the ability of the site to meet the performance objectives of this chapter or significantly mask the environmental monitoring program, provided an extensive environmental monitoring program exists which is designed to differentiate, to the maximum extent practicable, between contributions from the disposal site and other nearby facilities.

(2) (Reserved.)

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-250-300, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-61-220, filed 12/11/86.]

WAC 246-250-320 Disposal site design for land disposal. (1) Disposal site design for near-surface disposal.

(a) Site design features shall be directed toward long-term isolation and avoidance of the need for continuing active maintenance after site closure.

(b) The disposal site design and operation shall be compatible with the disposal site closure and stabilization plan and lead to disposal site closure that provides reasonable assurance that the performance objectives will be met.

(c) The disposal site shall be designed to complement and improve, where appropriate, the ability of the disposal site's natural characteristics to assure that the performance objectives will be met.

(d) Covers shall be designed to minimize to the extent practicable water infiltration, to direct percolating or surface water away from the disposed waste, and to resist degradation by surface geologic processes and biotic activity.

(e) Surface features shall direct surface water drainage away from disposal units at velocities and gradients which will not result in erosion that will require ongoing active maintenance in the future.

(f) The disposal site shall be designed to minimize to the extent practicable the contact of water with waste during storage, the contact of standing water with waste during disposal, and the contact of percolating or standing water with wastes after disposal.

(2) (Reserved.)

[Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-250-320, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-61-230, filed 12/11/86.]

WAC 246-250-330 Land disposal facility operation and disposal site closure. (1) Near-surface disposal facility operation and disposal site closure.

(a) Wastes designated as Class A pursuant to chapter 246-249 WAC shall be segregated from other wastes by placing in disposal units which are sufficiently separated from disposal units for the other waste classes so that any interaction between Class A wastes and other wastes will not result in the failure to meet the performance objectives of this chapter. This segregation is not necessary for Class A wastes if they meet the stability requirements in chapter 246-249 WAC.

(b) Wastes designated as Class C pursuant to chapter 246-249 WAC shall be disposed of so that the top of the waste is a minimum of five meters below the top surface of the cover or must be disposed of with intruder barriers that are designed to protect against an inadvertent intrusion for at least five hundred years.

(c) Except as provided in (l) of this subsection, only waste classified as Class A, B, or C shall be acceptable for near-surface disposal. All waste shall be disposed of in accordance with the requirements of (d) through (k) of this subsection.

(2003 Ed.)

(d) Wastes shall be emplaced in a manner that maintains the package integrity during emplacement, minimizes the void spaces between packages, and permits the void spaces to be filled.

(e) Void spaces between waste packages shall be filled with earth or other material to reduce future subsidence within the fill.

(f) Waste shall be placed and covered in a manner that limits the radiation dose rate at the surface of the cover to levels that at a minimum will permit the licensee to comply with all provisions of chapter 246-221 WAC at the time the license is transferred pursuant to WAC 246-250-140.

(g) The boundaries and locations of each disposal unit shall be accurately located and mapped by means of a land survey. Near-surface disposal units shall be marked in such a way that the boundaries of each unit can be easily defined. Three permanent survey marker control points, referenced to United States Geological Survey (USGS) or National Geodetic Survey (NGS) survey control stations, shall be established on the site to facilitate surveys. The USGS or NGS control stations shall provide horizontal and vertical controls as checked against USGS or NGS record files.

(h) A buffer zone of land shall be maintained between any buried waste and the disposal site boundary and beneath the disposed waste. The buffer zone shall be of adequate dimensions to carry out environmental monitoring activities specified in WAC 246-250-340(4) and take mitigative measures if needed.

(i) Closure and stabilization measures as set forth in the approved site closure plan shall be carried out as each disposal unit is filled and covered.

(j) Active waste disposal operations shall not have an adverse effect on completed closure and stabilization measures.

(k) Only wastes containing or contaminated with radioactive material shall be disposed of at the disposal site.

(l) Proposals for disposal of waste that is not generally acceptable for near-surface disposal because the waste form and disposal methods must be different and, in general, more stringent than those specified for Class C waste, may be submitted to the department for approval.

(2) (Reserved.)

[Statutory Authority: RCW 70.98.050 and 70.98.080, 91-16-109 (Order 187), § 246-250-330, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-250-330, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-61-240, filed 12/11/86.]

WAC 246-250-340 Environmental monitoring. (1) At the time a new license application is submitted, the applicant shall have conducted a preoperational monitoring program to provide basic environmental data on the disposal site characteristics. The applicant shall obtain information about the ecology, meteorology, climate, hydrology, geology, geochemistry, and seismology of the disposal site. For those characteristics that are subject to seasonal variation, data must cover at least a twelve-month period.

(2) During the land disposal facility site construction and operation, the licensee shall maintain an environmental monitoring program. Measurements and observations must be

[Title 246 WAC—p. 429]

made and recorded to provide data to evaluate the potential health and environmental impacts during both the construction and the operation of the facility and to enable the evaluation of long-term effects and the need for mitigative measures. The monitoring system must be capable of providing early warning of releases of waste from the disposal site before they leave the site boundary.

(3) After the disposal site is closed, the licensee responsible for postoperational surveillance of the disposal site shall maintain a monitoring system based on the operating history and the closure and stabilization of the disposal site. The monitoring system must be capable of providing early warning of releases of waste from the disposal site before they leave the site boundary.

(4) The licensee shall have plans for taking corrective measures if the environmental monitoring program detects migration of waste which would indicate that the performance objectives may not be met.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-340, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-250, filed 12/11/86.]

WAC 246-250-350 Alternative requirements for design and operations. The department may, upon request or on its own initiative, authorize provisions other than those set forth in WAC 246-250-300 through 246-250-340 for the segregation and disposal of waste and for the design and operation of a land disposal facility on a specific basis, if it finds reasonable assurance of compliance with the performance objectives of this chapter.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-250-350, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-350, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-260, filed 12/11/86.]

WAC 246-250-360 Institutional requirements. (1) Land ownership. Disposal of waste received from other persons may be permitted only on land owned in fee by the federal or state government.

(2) Institutional control. The land owner or custodial agency shall conduct an institutional control program to physically control access to the disposal site following transfer of control of the disposal site from the disposal site operator. The institutional control program shall also include, but not be limited to, conducting an environmental monitoring program at the disposal site, periodic surveillance, minor custodial care, and other requirements as determined by the department; and administration of funds to cover the costs for these activities. The period of institutional controls will be determined by the department, but controls may not be relied upon for more than one hundred years following transfer of institutional control of the disposal site to the owner.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-360, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-270, filed 12/11/86.]

WAC 246-250-370 Alternative requirements for waste classification and characteristics. The department may, upon request or on its own initiative, authorize other

provisions for the classification and characteristics of waste on a specific basis, if, after evaluation of the specific characteristics of the waste, disposal site, and method of disposal, it finds reasonable assurance of compliance with the performance objectives specified in this chapter.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-370, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-280, filed 12/11/86.]

FINANCIAL ASSURANCES

WAC 246-250-500 Applicant qualifications and assurances. Each applicant shall show that it either possesses the necessary funds or has reasonable assurance of obtaining the necessary funds, or by a combination of the two, to cover the estimated costs of conducting all licensed activities over the planned operating life of the project, including costs of construction and disposal.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-500, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-290, filed 12/11/86.]

WAC 246-250-520 Funding for disposal site closure and stabilization. (1) The applicant shall provide assurances prior to the commencement of operations that sufficient funds will be available to carry out disposal site closure and stabilization, including: (a) Decontamination or dismantlement of land disposal facility structures; and (b) closure and stabilization of the disposal site so that following transfer of the disposal site to the site owner, the need for ongoing active maintenance is eliminated to the extent practicable and only minor custodial care, surveillance and monitoring are required. These assurances shall be based on department-approved cost estimates reflecting the department-approved plan for disposal site closure and stabilization. The applicant's cost estimates must take into account total costs that would be incurred if an independent contractor were hired to perform the closure and stabilization work.

(2) In order to avoid unnecessary duplication and expense, the department will accept financial sureties that have been consolidated with earmarked financial or surety arrangements established to meet requirements of federal or other state agencies for such decontamination, closure, and stabilization. The department will accept these arrangements only if they are considered adequate to satisfy the requirements of this section and that the portion of the surety which covers the closure of the disposal site is clearly identified and committed for use in accomplishing these activities.

(3) The licensee's financial or surety arrangement shall be submitted annually for review by the department to assure that sufficient funds will be available for completion of the closure plan.

(4) The amount of the licensee's financial or surety arrangement shall change in accordance with changes in the predicted costs of closure and stabilization. Factors affecting closure and stabilization cost estimates include inflation, increases in the amount of disturbed land, changes in engineering plans, closure and stabilization that has already been accomplished, and any other conditions affecting costs. The financial or surety arrangement shall be sufficient at all times

to cover the costs of closure and stabilization of the disposal units that are expected to be used before the next license renewal.

(5) The financial or surety arrangement shall be written for a specified period of time and shall be automatically renewed unless the person who issues the surety notifies the department, the beneficiary (the site owner), and the principal (the licensee) not less than ninety days prior to the renewal date of its intention not to renew. In such a situation, the licensee must submit a replacement surety within thirty days after notification of cancellation. If the licensee fails to provide a replacement surety acceptable to the department, the beneficiary may collect on the original surety.

(6) Proof of forfeiture shall not be necessary to collect the surety so that, in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. The conditions described above shall be clearly stated on any surety instrument.

(7) Financial or surety arrangements generally acceptable to the department include surety bonds, cash deposits, certificates of deposit, deposits of government securities, escrow accounts, irrevocable letters or lines of credit, trust funds, and combinations of the above or such other types of arrangements as may be approved by the department. Self-insurance, or any arrangement which essentially constitutes self-insurance, will not satisfy the surety requirement for private sector applicants.

(8) The licensee's financial or surety arrangement shall remain in effect until the closure and stabilization program has been completed and approved by the department, and the license has been transferred to the site owner.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-520, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-300, filed 12/11/86.]

WAC 246-250-530 Financial assurances for institutional controls. (1) Prior to the issuance of the license, the applicant shall provide for departmental approval, a binding arrangement, between the applicant and the disposal site owner that ensures that sufficient funds will be available to cover the costs of monitoring and any required maintenance during the institutional control period. The binding arrangement shall be reviewed annually by the department to ensure that changes in inflation, technology, and disposal facility operations are reflected in the arrangements.

(2) Subsequent changes to the binding arrangement specified in subsection (1) of this section relevant to institutional control shall be submitted to the department for prior approval.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-530, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-310, filed 12/11/86.]

RECORDS, REPORTS, TESTS, AND INSPECTIONS

WAC 246-250-600 Maintenance of records, reports, and transfers. (1) Each licensee shall maintain any records and make any reports in connection with the licensed activi-

ties as may be required by the conditions of the license or by the rules, regulations, and orders of the department.

(2) Records which are required by these regulations or by license conditions shall be maintained for a period specified by the appropriate regulations or by license condition. If a retention period is not otherwise specified, these records must be maintained and transferred to the officials specified in subsection (4) of this section as a condition of license termination unless the department otherwise authorizes their disposition.

(3) Records which shall be maintained pursuant to this chapter may be the original or a reproduced copy or microfilm if this reproduced copy or microfilm is capable of producing copy that is clear and legible at the end of the required retention period.

(4) Notwithstanding subsections (1) through (3) of this section, copies of records of the location and the quantity of wastes contained in the disposal site must be transferred upon license termination to the chief executive of the nearest municipality, the chief executive of the county in which the facility is located, the county zoning board or land development and planning agency, the state governor, the United States Department of Energy, and other state, local, and federal governmental agencies as designated by the department at the time of license termination.

(5) Following receipt and acceptance of a shipment of radioactive waste, the licensee shall record the date that the shipment is received at the disposal facility, the date of disposal of the waste, a traceable shipment manifest number, a description of any engineered barrier or structural overpack provided for disposal of the waste, the location of disposal at the disposal site, the containment integrity of the waste disposal containers as received, any discrepancies between materials listed on the manifest and those received, the volume of any pallets, bracing, or other shipping or on-site generated materials that are contaminated, and are disposed of as contaminated or suspect materials, and any evidence of leaking or damaged disposal containers or radiation or contamination levels in excess of limits specified in U.S. Department of Transportation and state of Washington regulations. The licensee shall briefly describe any repackaging operations of any of the disposal containers included in the shipment, plus any other information required by the department as a license condition. The licensee shall retain these records until the department transfers or terminates the license that authorizes the activities described in these regulations.

(6) Each licensee authorized to dispose of waste received from other persons shall file a copy of its financial report or a certified financial statement annually with the department in order to update the information base for determining financial qualifications.

(7)(a) Each licensee authorized to dispose of waste received from other persons, pursuant to this chapter, shall submit annual reports to the department. Reports shall be submitted by the end of the first calendar quarter of each year for the preceding year.

(b) The reports shall include:

(i) Specification of the quantity of each of the principal contaminants released to unrestricted areas in liquid and in airborne effluents during the preceding year;

(ii) The results of the environmental monitoring program;

(iii) A summary of licensee disposal unit survey and maintenance activities;

(iv) A summary, by waste class, of activities and quantities of radionuclides disposed of;

(v) Any instances in which observed site characteristics were significantly different from those described in the application for a license; and

(vi) Any other information the department may require.

(c) If the quantities of waste released during the reporting period, monitoring results, or maintenance performed are significantly different from those expected, the report must cover this specifically.

(8) In addition to the other requirements of this section, the licensee shall store, or have stored, manifest and other information pertaining to receipt and disposal of radioactive waste in an electronic recordkeeping system.

(a) The manifest information that must be electronically stored is:

(i) That required in WAC 246-249-090 with the exception of shipper and carrier telephone numbers and shipper and consignee certifications; and

(ii) That information required in subsection (5) of this section.

(b) As specified in facility license conditions, the licensee shall have the capability to report the stored information, or subsets of this information, on a computer-readable medium.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 98-09-117, § 246-250-600, filed 4/22/98, effective 5/23/98; 91-16-109 (Order 187), § 246-250-600, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-600, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-320, filed 12/11/86.]

WAC 246-250-620 Tests on land disposal facilities.

Each licensee shall perform, or permit the department to perform, any tests the department deems appropriate or necessary for the administration of the regulations in this chapter, including but not limited to, tests of:

(1) Wastes;

(2) Facilities used for the receipt, storage, treatment, handling, or disposal of wastes;

(3) Radiation detection and monitoring instruments; or

(4) Other equipment and devices used in connection with the receipt, possession, handling, treatment, storage, or disposal of waste.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-620, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-330, filed 12/11/86.]

LAND DISPOSAL OF RADIOACTIVE WASTE

WAC 246-250-700 Agency inspections of land disposal facilities. (1) Each licensee shall afford to the department at all reasonable times opportunity to inspect waste not yet disposed of, and the premises, equipment, operations, and facilities in which wastes are received, possessed, handled, treated, stored, or disposed.

[Title 246 WAC—p. 432]

(2) Each licensee shall make available to the department for inspection, upon reasonable notice, records kept by it pursuant to these regulations. Authorized representatives of the department may copy and take away copies of, for the department's use, any record required to be kept pursuant to these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-700, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-340, filed 12/11/86.]

Chapter 246-252 WAC

RADIATION PROTECTION—URANIUM AND/OR THORIUM MILLING

WAC

246-252-001	Reclamation and decommissioning.
246-252-010	Definitions.
246-252-020	Purpose of uranium mill tailings areas.
246-252-030	Criteria related to disposition of uranium mill tailings or wastes.
246-252-040	Continuing dose assessment.
246-252-050	Appendix A.

WAC 246-252-001 Reclamation and decommissioning. A specific plan for reclamation and disposal of tailings and for decommissioning the site of uranium or thorium milling operations shall be included as part of the proposed action assessed under SEPA regulations and guidelines as required by WAC 246-235-086(1) for licensing of environmentally significant operations. For any uranium or thorium mill in operation on or before the effective date of this regulation for which a plan for reclamation and disposal of tailings and decommissioning of the site has not been submitted and assessed, such a plan must be submitted to the department and a final environmental impact statement or final declaration of nonsignificance must accompany or precede the license renewal.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-252-001, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-252-001, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-52-005, filed 11/30/79, effective 1/1/80.]

WAC 246-252-010 Definitions. The following definitions apply to the specified terms as used in this chapter.

(1) "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is, or potentially is (a) hydraulically interconnected to a natural aquifer, (b) capable of discharge to surface water, or (c) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred to long-term government ownership and care in accordance with WAC 246-252-030(11).

(2) "As expeditiously as practicable considering technological feasibility," for the purposes of Criterion 6A, means as quickly as possible considering: The physical characteristics of the tailings and the site; the limits of available technology; the need for consistency with mandatory requirements

(2003 Ed.)

(ii) The results of the environmental monitoring program;

(iii) A summary of licensee disposal unit survey and maintenance activities;

(iv) A summary, by waste class, of activities and quantities of radionuclides disposed of;

(v) Any instances in which observed site characteristics were significantly different from those described in the application for a license; and

(vi) Any other information the department may require.

(c) If the quantities of waste released during the reporting period, monitoring results, or maintenance performed are significantly different from those expected, the report must cover this specifically.

(8) In addition to the other requirements of this section, the licensee shall store, or have stored, manifest and other information pertaining to receipt and disposal of radioactive waste in an electronic recordkeeping system.

(a) The manifest information that must be electronically stored is:

(i) That required in WAC 246-249-090 with the exception of shipper and carrier telephone numbers and shipper and consignee certifications; and

(ii) That information required in subsection (5) of this section.

(b) As specified in facility license conditions, the licensee shall have the capability to report the stored information, or subsets of this information, on a computer-readable medium.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 98-09-117, § 246-250-600, filed 4/22/98, effective 5/23/98; 91-16-109 (Order 187), § 246-250-600, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-600, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-320, filed 12/11/86.]

WAC 246-250-620 Tests on land disposal facilities.

Each licensee shall perform, or permit the department to perform, any tests the department deems appropriate or necessary for the administration of the regulations in this chapter, including but not limited to, tests of:

(1) Wastes;

(2) Facilities used for the receipt, storage, treatment, handling, or disposal of wastes;

(3) Radiation detection and monitoring instruments; or

(4) Other equipment and devices used in connection with the receipt, possession, handling, treatment, storage, or disposal of waste.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-620, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-330, filed 12/11/86.]

LAND DISPOSAL OF RADIOACTIVE WASTE

WAC 246-250-700 Agency inspections of land disposal facilities. (1) Each licensee shall afford to the department at all reasonable times opportunity to inspect waste not yet disposed of, and the premises, equipment, operations, and facilities in which wastes are received, possessed, handled, treated, stored, or disposed.

[Title 246 WAC—p. 432]

(2) Each licensee shall make available to the department for inspection, upon reasonable notice, records kept by it pursuant to these regulations. Authorized representatives of the department may copy and take away copies of, for the department's use, any record required to be kept pursuant to these regulations.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-250-700, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-61-340, filed 12/11/86.]

Chapter 246-252 WAC

RADIATION PROTECTION—URANIUM AND/OR THORIUM MILLING

WAC

246-252-001	Reclamation and decommissioning.
246-252-010	Definitions.
246-252-020	Purpose of uranium mill tailings areas.
246-252-030	Criteria related to disposition of uranium mill tailings or wastes.
246-252-040	Continuing dose assessment.
246-252-050	Appendix A.

WAC 246-252-001 Reclamation and decommissioning. A specific plan for reclamation and disposal of tailings and for decommissioning the site of uranium or thorium milling operations shall be included as part of the proposed action assessed under SEPA regulations and guidelines as required by WAC 246-235-086(1) for licensing of environmentally significant operations. For any uranium or thorium mill in operation on or before the effective date of this regulation for which a plan for reclamation and disposal of tailings and decommissioning of the site has not been submitted and assessed, such a plan must be submitted to the department and a final environmental impact statement or final declaration of nonsignificance must accompany or precede the license renewal.

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-252-001, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-252-001, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 79-12-073 (Order 1459), § 402-52-005, filed 11/30/79, effective 1/1/80.]

WAC 246-252-010 Definitions. The following definitions apply to the specified terms as used in this chapter.

(1) "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is, or potentially is (a) hydraulically interconnected to a natural aquifer, (b) capable of discharge to surface water, or (c) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred to long-term government ownership and care in accordance with WAC 246-252-030(11).

(2) "As expeditiously as practicable considering technological feasibility," for the purposes of Criterion 6A, means as quickly as possible considering: The physical characteristics of the tailings and the site; the limits of available technology; the need for consistency with mandatory requirements

(2003 Ed.)

of other regulatory programs; and factors beyond the control of the licensee. The phrase permits consideration of the cost of compliance only to the extent specifically provided for by use of the term "available technology."

(3) "Available technology" means technologies and methods for emplacing a final radon barrier on uranium mill tailings piles or impoundments. This term shall not be construed to include extraordinary measures or techniques that would impose costs that are grossly excessive as measured by practice within the industry (or one that is reasonably analogous), (such as, by way of illustration only, unreasonable overtime, staffing, or transportation requirements, etc., considering normal practice in the industry; laser fusion of soils, etc.), provided there is reasonable progress toward emplacement of the final radon barrier. To determine grossly excessive costs, the relevant baseline against which cost shall be compared is the cost estimate for tailings impoundment closure contained in the licensee's approved reclamation plan, but costs beyond these estimates shall not automatically be considered grossly excessive.

(4) "Closure" means the activities following operations to decontaminate and decommission the buildings and site used to produce by-product materials and reclaim the tailings and/or waste disposal area.

(5) "Closure plan" means the department approved plan to accomplish closure.

(6) "Compliance period" begins when the department sets secondary groundwater protection standards and ends when the owner or operator's license is terminated and the site is transferred to the state or federal agency for long-term care.

(7) "Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

(8) "Disposal area" means the area containing by-product materials to which the requirements of Criterion 6 apply.

(9) "Existing portion" means that land surface area of an existing surface impoundment on which significant quantities of uranium or thorium by-product materials had been placed prior to September 30, 1983.

(10) "Factors beyond the control of the licensee" means factors proximately causing delay in meeting the schedule in the applicable reclamation plan for the timely emplacement of the final radon barrier notwithstanding the good faith efforts of the licensee to complete the barrier in compliance with paragraph (a) of Criterion 6A. These factors may include, but are not limited to:

- (a) Physical conditions at the site;
- (b) Inclement weather or climatic conditions;
- (c) An act of God;
- (d) An act of war;

(e) A judicial or administrative order or decision, or change to the statutory, regulatory, or other legal requirements applicable to the licensee's facility that would preclude or delay the performance of activities required for compliance;

(f) Labor disturbances;

(g) Any modifications, cessation or delay ordered by state, federal, or local agencies;

(2003 Ed.)

(h) Delays beyond the time reasonably required in obtaining necessary government permits, licenses, approvals, or consent for activities described in the reclamation plan proposed by the licensee that result from agency failure to take final action after the licensee has made a good faith, timely effort to submit legally sufficient applications, responses to requests (including relevant data requested by the agencies), or other information, including approval of the reclamation plan; and

(i) An act or omission of any third party over whom the licensee has no control.

(11) "Final radon barrier" means the earthen cover (or approved alternative cover) over tailings or waste constructed to comply with Criterion 6 of WAC 246-252-030 (excluding erosion protection features).

(12) "Groundwater" means water below the land surface in a zone of saturation. For the purposes of this chapter, groundwater is the water contained within an aquifer as defined above.

(13) "Leachate" means any liquid, including any suspended or dissolved components in the liquid, that has percolated through or drained from the by-product material.

(14) "Licensed site" means the area contained within the boundary of a location under the control of persons generating or storing by-product materials under a department license.

(15) "Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment which restricts the downward or lateral escape of by-product material, hazardous constituents, or leachate.

(16) "Milestone" means an action or event that is required to occur by an enforceable date.

(17) "Operation" means that a uranium or thorium mill tailings pile or impoundment is being used for the continued placement of by-product material or is in standby status for such placement. A pile or impoundment is in operation from the day that by-product material is first placed in the pile or impoundment until the day final closure begins.

(18) "Point of compliance" is the site specific location in the uppermost aquifer where the groundwater protection standard must be met.

(19) "Reclamation plan," for the purposes of Criterion 6A, means the plan detailing activities to accomplish reclamation of the tailings or waste disposal area in accordance with the technical criteria of WAC 246-252-030. The reclamation plan must include a schedule for reclamation milestones that are key to the completion of the final radon barrier including as appropriate, but not limited to, wind blown tailings retrieval and placement on the pile, interim stabilization (including dewatering or the removal of freestanding liquids and recontouring), and final radon barrier construction. (Reclamation of tailings must also be addressed in the closure plan; the detailed reclamation plan may be incorporated into the closure plan.)

(20) "Surface impoundment" means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well.

(21) "Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

[Statutory Authority: RCW 70.98.050. 97-13-055, § 246-252-010, filed 6/16/97, effective 7/17/97. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-252-010, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-52-050, filed 12/11/86.]

WAC 246-252-020 Purpose of uranium mill tailings areas. Uranium mill tailing areas shall be used only for disposal of radioactive wastes originating from the exploration, mining, and milling of uranium.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080 and chapter 70.121 RCW. 86-17-027 (Order 2406), § 402-52-090, filed 8/13/86.]

WAC 246-252-030 Criteria related to disposition of uranium mill tailings or wastes. As used in this section, the term "as low as reasonably achievable" has the same meaning as in WAC 246-220-007. The term by-product material means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

As required by WAC 246-235-110(6), each applicant for a license to possess and use source material in conjunction with uranium or thorium milling, or by-product material at sites formerly associated with such milling, is required to include in a license application proposed specifications relating to the milling operation and the disposition of tailings or waste resulting from such milling activities. This section establishes criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located and site and by-product material ownership. Applications must clearly demonstrate how these criteria have been addressed. The specifications shall be developed considering the expected full capacity of tailings or waste systems and the lifetime of mill operations. Where later expansions of systems or operations may be likely, the amenability of the disposal system to accommodate increased capacities without degradation in long-term stability and other performance factors shall be evaluated.

Licenseses or applicants may propose alternatives to the specific requirements in these criteria. The alternative proposals may take into account local or regional conditions, including geology, topography, hydrology, and meteorology. The department may find that the proposed alternatives meet the department's requirements if the alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by the requirements of the standards promulgated by the United States Environmental Protection Agency in 40 CFR 192, Subparts D and E.

[Title 246 WAC—p. 434]

(1) Criterion 1 - In selecting among alternative tailings disposal sites or judging the adequacy of existing tailings sites, the following site features which would contribute to meeting the broad objective of permanent isolation of the tailings and associated contaminants from man and the environment for one thousand years to the extent reasonably achievable, and in any case, for at least two hundred years without ongoing active maintenance shall be considered:

- (a) Remoteness from populated areas;
- (b) Hydrogeologic and other environmental conditions conducive to continued immobilization and isolation of contaminants from groundwater sources; and
- (c) Potential for minimizing erosion, disturbance, and dispersion by natural forces over the long term.

The site selection process must be an optimization to the maximum extent reasonably achievable in terms of these features.

In the selection of disposal sites, primary emphasis shall be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. While isolation of tailings will be a function of both site characteristics and engineering design, overriding consideration shall be given to siting features given the long-term nature of the tailings hazards.

Tailings shall be disposed in a manner such that no active maintenance is required to preserve the condition of the site.

(2) Criterion 2 - To avoid proliferation of small waste disposal sites, by-product material from in-situ extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote above ground extraction operations shall be disposed at existing large mill tailings disposal sites; unless, considering the nature of the wastes, such as their volume and specific activity and the costs and environmental impacts of transporting the wastes to a large disposal site, such offsite disposal is demonstrated to be impracticable or the advantage of onsite burial clearly outweighs the benefits of reducing the perpetual surveillance obligations.

(3) Criterion 3 - The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits (that is, where the need for any specially constructed retention structure is eliminated).

The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicants' environmental reports) shall reflect serious consideration of this disposal mode. In some instances, below grade disposal may not be the most environmentally sound approach, such as might be the case if a groundwater formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full, below grade burial impracticable; for example, near-surface bedrock could create prominent excavation costs while more suitable alternate sites may be available. Where full below grade burial is not practicable, the size of the retention structures, and the size and steepness of slopes of associated exposed embankments, shall be minimized by excavation to the maximum extent reasonably achievable or appropriate,

(2003 Ed.)

given the geologic and hydrogeologic conditions at a site. In these cases, it must be demonstrated that an above-grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

(4) Criterion 4 - The following site and design criteria shall be adhered to whether tailings or wastes are disposed of above or below grade:

(a) Upstream rainfall catchment areas must be minimized to decrease erosion potential and the size of the probable maximum flood which could erode or wash out sections of the tailings disposal area.

(b) Topographic features shall provide good wind protection.

(c) Embankment and cover slopes shall be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long-term stability. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade; this could, for example, lead to slopes of about ten horizontal to one vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A fully self-sustaining vegetative cover shall be established or rock cover employed to reduce wind and water erosion to negligible levels.

Where a full vegetative cover is not likely to be self-sustaining due to climatic conditions, such as in semi-arid and arid regions, rock cover shall be employed on slopes of the impoundment system. The NRC will consider relaxing this requirement for extremely gentle slopes such as those which may exist on the top of the pile.

The following factors shall be considered in establishing the final rock cover design to avoid displacement of rock particles by human and animal traffic or by natural processes, and to preclude undercutting and piping:

(i) Shape, size, composition, gradation of rock particles (excepting bedding material, average particle size shall be at least cobble size or greater);

(ii) Rock cover thickness and zoning of particles by size; and

(iii) Steepness of underlying slopes.

(e) Individual rock fragments shall be dense, sound, and resistant to abrasion, and free from defects that would tend to unduly increase their destruction by water and frost actions. Weak, friable, or laminated aggregate shall not be used. Shale, rock laminated with shale, and cherts shall not be used.

Rock covering of slopes may not be required where top covers are on the order of ten meters or greater; impoundment slopes are on the order of 10h:1v or less; bulk cover materials have inherently favorable erosion resistance characteristics; and there is negligible drainage catchment area upstream of the pile, and there is good wind protection as described in (a) and (b) of this subsection.

(f) Impoundment surfaces shall be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient. In addition to rock cover on slopes,

areas toward which surface runoff might be directed shall be well protected with substantial rock cover (riprap). In addition to providing for stability of the impoundment systems itself, the overall stability, erosion potential, and geomorphology of surrounding terrain shall be evaluated to assure that there are no processes, such as gully erosion, which would lead to impoundment instability.

(g) The impoundment shall not be located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand. As used in this criterion, the term "capable fault" has the same meaning as defined in Section III (g) of Appendix A of 10 CFR Part 100. The term "maximum credible earthquake" means that earthquake which would cause the maximum vibratory ground motion based upon an evaluation of earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material.

(h) The impoundment, where feasible, should be designed to incorporate features which will promote deposition of suspended particles. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the object of such a design feature would be to enhance the thickness of cover over time.

(5) Criterion 5 - Criteria 5(a) through 5(g) and new Criterion 13 incorporate the basic groundwater protection standards imposed by the United States Environmental Protection Agency in 40 CFR Part 192, Subparts D and E (48 FR 45926; October 7, 1983) which apply during operations and prior to the end of closure. Groundwater monitoring to comply with these standards is required by Criterion 7.

(a) The primary groundwater protection standard is a design standard for surface impoundments used to manage uranium and thorium by-product material. Surface impoundments (except for an existing portion) must have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, groundwater, or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil, groundwater, or surface water) during the active life of the facility, provided that impoundment closure includes removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. For impoundments that will be closed with the liner material left in place, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility.

(b) The liner required by (a) of this subsection must be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in contact with the wastes or leachate.

(c) The applicant or licensee will be exempted from the requirements of (a) of this subsection if the department finds, based on a demonstration by the applicant or licensee, that alternate design and operating practices, including the closure plan, together with site characteristics will prevent the migration of any hazardous constituents into groundwater or surface water at any future time. In deciding whether to grant an exemption, the department will consider:

(i) The nature and quantity of the wastes;

(ii) The proposed alternate design and operation;

(iii) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and groundwater or surface water; and

(iv) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

(d) A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave actions; rainfall; run-on; from malfunctions of level controllers, alarms, and other equipment; and human error.

(e) When dikes are used to form the surface impoundment, the dikes must be designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the impoundment.

(f) Uranium and thorium by-product materials must be managed to conform to the following secondary groundwater protection standard: Hazardous constituents entering the groundwater from a licensed site must not exceed the specified concentration limits in the uppermost aquifer beyond the point of compliance during the compliance period. Hazardous constituents are those constituents identified by the department pursuant to (g) of this subsection. Specified concentration limits are those limits established by the department as indicated in (j) of this subsection. The department will also establish the point of compliance and compliance period on a site specific basis through license conditions and orders. The objective in selecting the point of compliance is to provide the earliest practicable warning that the impoundment is releasing hazardous constituents to the groundwater. The point of compliance must be selected to provide prompt indication of groundwater contamination on the hydraulically downgradient edge of the disposal area. The department must identify hazardous constituents, establish concentration limits, set the compliance period, and adjust the point of compliance, if needed, when the detection monitoring established under criterion 7 indicates leakage of hazardous constituents from the disposal area.

(g) A constituent becomes a hazardous constituent subject to (j) of this subsection when the constituent:

(i) Is reasonably expected to be in or derived from the by-product material in the disposal area;

(ii) Has been detected in the groundwater in the uppermost aquifer; and

(iii) Is listed in WAC 246-252-050 Appendix A.

(h) The department may exclude a detected constituent from the set of hazardous constituents on a site specific basis if it finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to exclude constituents, the department will consider the following:

(i) Potential adverse effect on groundwater quality, considering —

(A) The physical and chemical characteristics of the waste in the licensed site, including its potential for migration;

(B) The hydrogeological characteristics of the facility and surrounding land;

(C) The quantity of groundwater and the direction of groundwater flow;

(D) The proximity and withdrawal rates of groundwater users;

(E) The current and future uses of groundwater in the area;

(F) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;

(G) The potential for health risks caused by human exposure to waste constituents;

(H) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(I) The persistence and permanence of the potential adverse effects.

(ii) Potential adverse effects on hydraulically-connected surface water quality, considering —

(A) The volume and physical and chemical characteristics of the waste in the licensed site;

(B) The hydrogeological characteristics of the facility and surrounding land;

(C) The quantity and quality of groundwater, and the direction of groundwater flow;

(D) The patterns of rainfall in the region;

(E) The proximity of the licensed site to surface waters;

(F) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(G) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(H) The potential for health risks caused by human exposure to waste constituents;

(I) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(J) The persistence and permanence of the potential adverse effects.

(i) In making any determinations under (h) and (k) of this subsection about the use of groundwater in the area around the facility, the department will consider any identification of

underground sources of drinking water and exempted aquifers made by the United States Environmental Protection Agency.

(j) At the point of compliance, the concentration of a hazardous constituent must not exceed —

(i) The department approved background concentration of that constituent in the groundwater;

(ii) The respective value given in the table in subsection (5)(l) of this section if the constituent is listed in the table and if the background level of the constituent is below the value listed; or

(iii) An alternate concentration limit established by the department.

(k) Conceptually, background concentrations pose no incremental hazards and the drinking water limits in (j)(i) of this subsection state acceptable hazards but these two options may not be practically achievable at a specific site. Alternate concentration limits that present no significant hazard may be proposed by licensees for department consideration. Licensees must provide the basis for any proposed limits including consideration of practicable corrective actions, that limits are as low as reasonably achievable, and information on the factors the department must consider.

The department will establish a site specific alternate concentration limit for a hazardous constituent as provided in (j) of this subsection if it finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the department will apply its as low as reasonably achievable criterion in this chapter. The department will also consider the following factors:

(i) Potential adverse effects on groundwater quality, considering —

(A) The physical and chemical characteristics of the waste in the licensed site including its potential for migration;

(B) The hydrogeological characteristics of the facility and surrounding land;

(C) The quantity of groundwater and the direction of groundwater flow;

(D) The proximity and withdrawal rates of groundwater users;

(E) The current and future uses of groundwater in the area;

(F) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;

(G) The potential for health risks caused by human exposure to waste constituents;

(H) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(I) The persistence and permanence of the potential adverse effects.

(ii) Potential adverse effects on hydraulically-connected surface water quality, considering —

(A) The volume and physical and chemical characteristics of the waste in the licensed site;

(B) The hydrogeological characteristics of the facility and surrounding land;

(C) The quantity and quality of groundwater, and the direction of groundwater flow;

(D) The patterns of rainfall in the region;

(E) The proximity of the licensed site to surface waters;

(F) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(G) The existing quality of surface water including other sources of contamination and the cumulative impact on surface water quality;

(H) The potential for health risks caused by human exposure to waste constituents;

(I) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(J) The persistence and permanence of the potential adverse effects.

(l) MAXIMUM VALUES FOR GROUNDWATER PROTECTION:

Constituent or Property	Maximum Concentration Milligrams per liter
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7 -epoxy-1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis(p-methoxyphenylethane)	0.1
Toxaphene (C ₁₀ H ₁₀ Cl ₆ , Technical chlorinated camphene, 67-69 percent chlorine)	0.005
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01
Combined radium - 226 and radium - 228	Picocuries per liter 5
Gross alpha - particle activity (excluding radon and uranium when producing uranium by-product material or thorium when producing thorium by-product material)	15

(m) If the groundwater protection standards established under (f) of this subsection are exceeded at a licensed site, a corrective action program must be put into operation as soon as is practicable, and in no event later than eighteen months after the department finds that the standards have been exceeded. The licensee shall submit the proposed corrective action program and supporting rationale for department approval prior to putting the program into operation, unless otherwise directed by the department. The objective of the program is to return hazardous constituent concentration levels in groundwater to the concentration limits set as standards. The licensee's proposed program must address removing the hazardous constituents that have entered the groundwater at the point of compliance or treating them in place. The program must also address removing or treating in place any hazardous constituents that exceed concentration limits in groundwater between the point of compliance and the

downgradient facility property boundary. The licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the groundwater protection standard. The department will determine when the licensee may terminate corrective action measures based on data from the groundwater monitoring program and other information that provide reasonable assurance that the groundwater protection standard will not be exceeded.

(n) In developing and conducting groundwater protection programs, applicants and licensees shall also consider the following:

(i) Installation of bottom liners (where synthetic liners are used, a leakage detection system must be installed immediately below the liner to ensure major failures are detected if they occur. This is in addition to the groundwater monitoring program conducted as provided in Criterion 7. Where clay liners are proposed or relatively thin, in-situ clay soils are to be relied upon for seepage control, tests must be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests must be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases deterioration has been observed to occur rather rapidly after about nine months of exposure)).

(ii) Mill process designs which provide the maximum practicable recycle of solutions and conservation of water to reduce the net input of liquid to the tailings impoundment.

(iii) Dewatering of tailings by process devices and/or in-situ drainage systems (at new sites, tailings must be dewatered by a drainage system installed at the bottom of the impoundment to lower the phreatic surface and reduce the driving head of seepage, unless tests show tailings are not amenable to such a system. Where in-situ dewatering is to be conducted, the impoundment bottom must be graded to assure that the drains are at a low point. The drains must be protected by suitable filter materials to assure that drains remain free running. The drainage system must also be adequately sized to assure good drainage).

(iv) Neutralization to promote immobilization of hazardous constituents.

(o) Where groundwater impacts are occurring at an existing site due to seepage, action must be taken to alleviate conditions that lead to excessive seepage impacts and restore groundwater quality. The specific seepage control and groundwater protection method, or combination of methods, to be used must be worked out on a site-specific basis. Technical specifications must be prepared to control installation of seepage control systems. A quality assurance, testing, and inspection program, which includes supervision by a qualified engineer or scientist, must be established to assure the specifications are met.

(p) In support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following:

(i) The chemical and radioactive characteristics of the waste solutions.

(ii) The characteristics of the underlying soil and geologic formations particularly as they will control transport of contaminants and solutions. This includes detailed informa-

tion concerning extent, thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and conductivities of the various formations must be determined. This information must be gathered from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to groundwater. The information gathered on boreholes must include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channeled deposits of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability may not be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing (e.g., pump tests) must be conducted to assure actual field properties are adequately understood. Testing must be conducted to allow estimating chemi-sorption attenuation properties of underlying soil and rock.

(iii) Location, extent, quality, capacity and current uses of any groundwater at and near the site.

(q) Steps must be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas.

(6) Criterion 6 - (a) In disposing of waste by-product material, licensees shall place an earthen cover (or approved alternative) over tailings or wastes at the end of milling operations and shall close the waste disposal area in accordance with a design¹ which provides reasonable assurance of control of radiological hazards to:

(i) Be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years; and

(ii) Limit releases of Radon-222 from uranium by-product materials, and Radon-220 from thorium by-product materials, to the atmosphere so as not to exceed an average² release rate of 20 picocuries per square meter per second (pCi/m²s) to the extent practicable throughout the effective design life determined pursuant to (a)(i) of this subsection (this criterion). In computing required tailings cover thicknesses, moisture in soils in excess of amounts found normally in similar soils in similar circumstances may not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer may not be taken into account in determining the calculated radon exhalation level. If nonsoil materials are proposed as cover materials, it must be demonstrated that these materials will not crack or degrade by differential settlement, weathering, or other mechanism, over long-term intervals.

(b) As soon as reasonably achievable after emplacement of the final cover to limit releases of Radon-222 from uranium by-product material and prior to placement of erosion protection barriers or other features necessary for long-term control of the tailings, the licensees shall verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective in limiting releases of Radon-222 to a level not exceeding 20 pCi/m²s averaged over the entire pile or impoundment using the procedures described in 40 CFR part 61, appendix B, Method 115, or

another method of verification approved by the Nuclear Regulatory Commission as being at least as effective in demonstrating the effectiveness of the final radon barrier.

(c) When phased emplacement of the final radon barrier is included in the applicable reclamation plan, the verification of Radon-222 release rates required in (b) of this subsection (this criterion) must be conducted for each portion of the pile or impoundment as the final radon barrier for that portion is emplaced.

(d) Within ninety days of the completion of all testing and analysis relevant to the required verification in (b) and (c) of this subsection (this criterion), the uranium mill licensee shall report to the department the results detailing the actions taken to verify that levels of release of Radon-222 do not exceed 20 pCi/m²s when averaged over the entire pile or impoundment. The licensee shall maintain records until termination of the license documenting the source of input parameters including the results of all measurements on which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine compliance. These records shall be kept in a form suitable for transfer to the custodial agency at the time of transfer of the site to DOE or a state for long-term care if requested.

(e) Near surface cover materials (i.e., within the top three meters) may not include waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding surface soils. This is to ensure that surface radon exhalation is not significantly above background because of the cover material itself.

(f) The design requirements in this criterion for longevity and control of radon releases apply to any portion of a licensed and/or disposal site unless such portion contains a concentration of radium in land, averaged over areas of 100 square meters, which, as a result of by-product material, does not exceed the background level by more than:

(i) 5 picocuries per gram (pCi/g) of radium-226, or, in the case of thorium by-product material, radium-228, averaged over the first 15 centimeters (cm) below the surface; and

(ii) 15 pCi/g of radium-226, or, in the case of thorium by-product material, radium-228, averaged over 15-cm thick layers more than 15 cm below the surface.

(g) By-product material containing concentrations of radionuclides other than radium in soil, and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the standard (benchmark dose) contained in (f) of this subsection, and must be at levels which are as low as is reasonably achievable (ALARA). If more than one residual radionuclide is present in the same 100 square meter area, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not exceed "1" (unity). A calculation of the potential peak annual TEDE within 1000 years to the average member of the critical group that would result from applying the radium standard, not including radon, on the site must be submitted for approval. The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the department. This

requirement for dose criteria does not apply to sites that have decommissioning plans for soil and structures approved before June 11, 1999.

(h) The licensee shall also address the nonradiological hazards associated with the wastes in planning and implementing closure. The licensee shall ensure that disposal areas are closed in a manner that minimizes the need for further maintenance. To the extent necessary to prevent threats to human health and the environment, the licensee shall control, minimize, or eliminate post-closure escape of nonradiological hazardous constituents, leachate, contaminated rainwater, or waste decomposition products to the ground or surface waters or to the atmosphere.

¹ In the case of thorium by-product materials, the standard applies only to design. Monitoring for radon emissions from thorium by-product materials after installation of an appropriately designed cover is not required.

² This average applies to the entire surface of each disposal area over a period of at least one year, but a period short compared to 100 years. Radon will come from both by-product materials and from covering materials. Radon emissions from covering materials should be estimated as part of developing a closure plan for each site. The standard, however, applies only to emissions from by-product materials to the atmosphere.

Criterion 6A - (a) For impoundments containing uranium by-product materials, the final radon barrier must be completed as expeditiously as practicable considering technological feasibility after the pile or impoundment ceases operation in accordance with a written, department-approved reclamation plan. (The term as expeditiously as practicable considering technological feasibility as specifically defined in WAC 246-252-010 includes factors beyond the control of the licensee.) Deadlines for completion of the final radon barrier and, if applicable, the following interim milestones must be established as a condition of the individual license: Wind-blown tailings retrieval and placement on the pile and interim stabilization (including dewatering or the removal of free-standing liquids and recontouring). The placement of erosion protection barriers or other features necessary for long-term control of the tailings must also be completed in a timely manner in accordance with a written, approved reclamation plan.

(b) The department may approve a licensee's request to extend the time for performance of milestones related to emplacement of the final radon barrier if, after providing an opportunity for public participation, the department finds that the licensee has adequately demonstrated in the manner required in subsection (6)(b) of this section (Criterion 6) that releases of Radon-222 do not exceed an average of 20 pCi/m²s. If the delay is approved on the basis that the radon releases do not exceed 20 pCi/m²s, a verification of radon levels, as required by subsection (6)(b) of this section (Criterion 6), must be made annually during the period of delay. In addition, once the department has established the date in the reclamation plan for the milestone for completion of the final radon barrier, the department may extend that date based on cost if, after providing an opportunity for public participation, the department finds that the licensee is making good faith efforts to emplace the final radon barrier, the delay is consistent with the definitions of available technology, and the radon releases caused by the delay will not result in a significant incremental risk to the public health.

(c) The department may authorize by license amendment, upon licensee request, a portion of the impoundment to accept uranium by-product material or such materials that are similar in physical, chemical, and radiological characteristics to the uranium mill tailings and associated wastes already in the pile or impoundment from other sources, during the closure process. No such authorization will be made if it results in a delay or impediment to emplacement of the final radon barrier over the remainder of the impoundment in a manner that will achieve levels of Radon-222 releases not exceeding 20 pCi/m²s averaged over the entire impoundment. The verification required in subsection (6)(b) of this section (Criterion 6) may be completed with a portion of the impoundment being used for further disposal if the department makes a final finding that the impoundment will continue to achieve a level of Radon-222 releases not exceeding 20 pCi/m²s averaged over the entire impoundment. In this case, after the final radon barrier is complete except for the continuing disposal area:

- (i) Only by-product material will be authorized for disposal;
- (ii) The disposal will be limited to the specified existing disposal area; and
- (iii) This authorization will only be made after providing opportunity for public participation.

Reclamation of the disposal area, as appropriate, must be completed in a timely manner after disposal operations cease in accordance with subsection (6)(a) of this section (Criterion 6); however, these actions are not required to be complete as part of meeting the deadline for final radon barrier construction.

(7) Criterion 7 - At least one full year prior to any major site construction, a preoperational monitoring program must be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program must be conducted to complete the following:

- (a) To measure or evaluate compliance with applicable standards and regulations;
- (b) To evaluate performance of control systems and procedures;
- (c) To evaluate environmental impacts of operation; and
- (d) To detect potential long-term effects.

The licensee shall establish a detection monitoring program needed for the department to set the site-specific groundwater protection standards in Criterion 5 of this section. For all monitoring under this paragraph, the licensee or applicant will propose for department approval as license conditions, which constituents are to be monitored on a site-specific basis. A detection monitoring program has two purposes. The initial purpose of the program is to detect leakage of hazardous constituents from the disposal area so that the need to set groundwater protection standards is monitored. If leakage is detected, the second purpose of the program is to generate data and information needed for the department to establish the standards under Criterion 5. The data and information must provide a sufficient basis to identify those hazardous constituents which require concentration limit standards and to enable the department to set the limits for those constituents and the compliance period. They may also need

to provide the basis for adjustments to the point of compliance. For licenses in effect September 30, 1983, the detection monitoring programs must have been in place by October 1, 1984. For licenses issued after September 30, 1983, the detection monitoring programs must be in place when specified by the department in orders or license conditions. Once groundwater protection standards have been established pursuant to Criterion 5, the licensee shall establish and implement a compliance monitoring program. The purpose of the compliance monitoring program is to determine that the hazardous constituent concentrations in ground water continue to comply with the standards set by the department. In conjunction with a corrective action program, the licensee shall establish and implement a corrective action monitoring program. The purpose of the corrective action monitoring program is to demonstrate the effectiveness of the corrective actions. Any monitoring program required by this paragraph may be based on existing monitoring programs to the extent the existing programs can meet the stated objective for the program.

(8) Criterion 8 - Milling operations shall be conducted so that all airborne effluent releases are reduced to as low as is reasonably achievable. The primary means of accomplishing this shall be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after all practicable measures have been taken to control emissions at the source. Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure (aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations. During operations and prior to closure, radiation doses from radon emissions from surface impoundments shall be kept as low as is reasonably achievable. Checks shall be made and logged hourly of all parameters (e.g., differential pressure and scrubber water flow rate) which determine the efficiency of yellowcake stack emission control equipment operation. It shall be determined whether or not conditions are within a range prescribed to ensure that the equipment is operating consistently near peak efficiency; corrective action shall be taken when performance is outside of prescribed ranges. Effluent control devices shall be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack.

Drying and packaging operations shall terminate when controls are inoperative. When checks indicate the equipment is not operating within the range prescribed for peak efficiency, actions shall be taken to restore parameters to the prescribed range. When this cannot be done without shutdown and repairs, drying and packaging operations shall cease as soon as practicable.

Operations may not be restarted after cessation due to off-normal performance until needed corrective actions have been identified and implemented. All such cessations, corrective actions, and restarts shall be reported to the department in writing, within ten days of the subsequent restart.

To control dusting from tailings, that portion not covered by standing liquids shall be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration shall be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments since this will help in controlling particulate and radon emissions during operation. To control dustings from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators shall develop written operating procedures specifying the methods of control which will be utilized.

Milling operations producing or involving thorium by-product material shall be conducted in such a manner as to provide reasonable assurance that the annual dose equivalent does not exceed twenty-five millirems to the whole body, seventy-five millirems to the thyroid, and twenty-five millirems to any other organ of any member of the public as a result of exposures to the planned discharge of radioactive materials, Radon-220 and its daughters excepted, to the general environment.

Uranium and thorium by-product materials shall be managed so as to conform to the applicable provisions of Title 40 of the Code of Federal Regulations, Part 440, Ore Mining and Dressing Point Source Category: Effluent Limitations Guidelines and New Source Performance Standards, Subpart C, Uranium, Radium, and Vanadium Ores Subcategory, as codified on January 1, 1983.

The licensee shall establish a detection monitoring program needed to establish the groundwater protection standards in subsection (5)(f) of this section. A detection monitoring program has two purposes. The initial purpose of the program is to detect leakage of hazardous constituents from the disposal area so that the need to set groundwater protection standards is monitored. If leakage is detected, the second purpose of the program is to generate data and information needed for the department to establish the standards under subsection (5)(f) of this section. The data and information must provide a sufficient basis to identify those hazardous constituents which require concentration limit standards and to enable the department to set the limits for those constituents and the compliance period. They may also need to provide the basis for adjustments to the point of compliance. For licenses in effect September 30, 1983, the detection monitoring programs must have been in place by October 1, 1984. For licenses issued after September 30, 1983, the detection monitoring programs must be in place when specified by the department in orders or license conditions. Once groundwater protection standards have been established pursuant to subsection (5)(f) of this section, the licensee shall establish and implement a compliance monitoring program. The purpose of the compliance monitoring program is to determine that the hazardous constituent concentrations in groundwater continue to comply with the standards set by the department. In conjunction with a corrective action program, the licensee shall establish and implement a corrective action monitoring program. The purpose of the corrective action monitoring

(2003 Ed.)

program is to demonstrate the effectiveness of the corrective actions. Any monitoring program required by this paragraph may be based on existing monitoring programs to the extent the existing programs can meet the stated objective for the program.

Daily inspections of tailings or waste retention systems must be conducted by a qualified engineer or scientist and documented. The department must be immediately notified of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

(9) Criterion 9 - (a) Pursuant to chapter 70.121 RCW, and except as otherwise provided, financial surety arrangements for site reclamation and long-term surveillance and control which may consist of surety bonds, cash deposits, certificates of deposit, deposits of government securities, irrevocable letters or lines of credit, or any combination of the above, or other arrangements approved by the department, milling operations shall be established for source material to ensure the protection of the public health and safety in the event of abandonment, default, or other inability of the licensee to meet the requirements of the act and these regulations.

(i) The amount of funds to be ensured by such surety arrangements shall be based on department-approved cost estimates.

(ii) Self-insurance, or any arrangement which essentially constitutes self-insurance (e.g., a contract with a state or federal agency), will not satisfy the surety requirement, since this provides no additional assurance other than that which already exists through license requirements.

(b) The arrangements required in (a) of this subsection shall be established prior to commencement of operations to assure that sufficient funds will be available to carry out decontamination and decommissioning of the facility.

(c) Amendments to licenses in effect on the effective date of this regulation may be issued, providing that the required surety arrangements are established within ninety days after the effective date of this subsection.

(d) For source material milling operations, the amount of funds to be ensured by such surety arrangements shall be based on department-approved cost estimates in an approved plan for (i) decontamination and decommissioning of mill buildings and the milling site to levels which would allow unrestricted use of these areas upon decommissioning, and (ii) the reclamation of tailings and/or waste disposal areas in accordance with the technical criteria delineated in this section. The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. In addition, the surety shall cover the payment of the charge for long-term surveillance and control required by the department. In establishing specific surety arrangements, the licensee's cost estimates shall take into account total costs that would be incurred if an independent

[Title 246 WAC—p. 441]

contractor were hired to perform the decommissioning and reclamation work. In order to avoid unnecessary duplication and expense, the department may accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other federal or state agencies and/or local governing bodies for such decommissioning, decontamination, reclamation, and long-term site surveillance, provided such arrangements are considered adequate to satisfy these requirements and that portion of the surety which covers the decommissioning and reclamation of the mill, mill tailings site and associated areas, and the long-term funding charge is clearly identified and committed for use in accomplishing these activities. The licensee's surety mechanism will be reviewed annually by the department to assure that sufficient funds will be available for completion of the reclamation plan if the work had to be performed by an independent contractor. The amount of surety liability should be adjusted to recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs. Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability shall be retained until final compliance with the reclamation plan is determined. This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance could be provided with a surety instrument which is written for a specific period of time (e.g., five years), yet which must be automatically renewed unless the surety notifies the beneficiary (the state regulatory agency) and the principal (the licensee) some reasonable time (e.g., ninety days) prior to the renewal date of their intention not to renew. In such a situation, the surety requirement still exists and the licensee would be required to submit an acceptable replacement surety within a brief period of time to allow at least sixty days for the department to collect.

Proof of forfeiture must not be necessary to collect the surety so that in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. The conditions described above would have to be clearly stated on any surety instrument which is not open-ended and must be agreed to by all parties.

Long-term care requirements. Pursuant to chapter 70.121 RCW, and as otherwise provided in WAC 246-235-086(4), a long-term care trust fund shall be established by source material milling licensees prior to the issuance of the license.

(10) Criterion 10 - (a) A minimum charge of two hundred fifty thousand dollars (1978 United States dollars) accrued as specified in WAC 246-235-086(4) to cover the costs of long-term surveillance shall be paid by each mill operator to the agency prior to the termination of a uranium or thorium mill license. If site surveillance or control requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those

specified in (a) of this subsection (e.g., if fencing is determined to be necessary), variance in funding requirements may be specified by the department. The total charge to cover the costs of long-term surveillance shall be such that, with an assumed one percent annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance. The charge will be adjusted annually prior to actual payments to recognize inflation. The inflation rate to be used is that indicated by the change in the consumer price index published by the United States Department of Labor, Bureau of Labor Statistics. Contributions by a licensee to the long-term care trust fund pursuant to chapter 70.121 RCW shall be transferred to cover the costs assessed under this criterion.

(11) Criterion 11 - These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, and apply to all licenses terminated, issued, or renewed after that date.

Any uranium or thorium milling license or tailings license shall contain such terms and conditions as the United States Nuclear Regulatory Commission determines necessary to assure that prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.

Title to the by-product material licensed pursuant to WAC 246-252-030 and land, including any interests therein (other than land owned by the United States or by the state of Washington) which is used for the disposal of any such by-product material, or is essential to ensure the long-term stability of such disposal site, shall be transferred to the United States or the state of Washington. In view of the fact that physical isolation must be the primary means of long-term control, and government land ownership is a desirable supplementary measure, ownership of certain severable subsurface interests (for example, mineral rights) may be determined to be unnecessary to protect the public health and safety and the environment. In any case, the applicant/operator must demonstrate a serious effort to obtain such subsurface rights, and must, in the event that certain rights cannot be obtained, provide notification in local public land records of the fact that the land is being used for the disposal of radioactive material and is subject to either a United States Nuclear Regulatory Commission general or specific license prohibiting the disruption and disturbance of the tailings. In some rare cases, such as may occur with deep burial where no ongoing site surveillance will be required, surface land ownership transfer requirements may be waived. For licenses issued before November 8, 1981, the United States Nuclear Regulatory Commission may take into account the status of the ownership of such land, and interests therein, and the ability of a licensee to transfer title and custody thereof to the United States or the state. If the United States Nuclear Regulatory Commission, subsequent to title transfer, determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a state will not endanger the public health, safety, welfare or environment, the United States Nuclear Regulatory Commission may permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the United States Nuclear Regulatory

Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.

Material and land transferred to the United States or a state in accordance with this criterion must be transferred without cost to the United States or a state other than administrative and legal costs incurred in carrying out such transfer.

The provisions of this part, respecting transfer of title and custody to land and tailings and wastes, do not apply in the case of lands held in trust by the United States for any Indian tribe, or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of by-product material, as defined in this section, the licensee shall enter into arrangements with the United States Nuclear Regulatory Commission as may be appropriate to assure the long-term surveillance of such lands by the United States.

(12) Criterion 12 - The final disposition of tailings or wastes at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation. As a minimum, annual site inspections must be conducted by the government agency retaining ultimate custody of the site where tailings or wastes are stored, to confirm the integrity of the stabilized tailings or waste systems, and to determine the need, if any, for maintenance and/or monitoring. Results of the inspection must be reported to the United States Nuclear Regulatory Commission within sixty days following each inspection. The United States Nuclear Regulatory Commission may require more frequent site inspections if, on the basis of a site-specific evaluation, such a need appears necessary, due to the features of a particular tailings or waste disposal system.

(13) Criterion 13 - Secondary groundwater protection standards required by Criterion 5 of this section are concentration limits for individual hazardous constituents. The list of constituents found in Appendix A of this chapter, chapter 246-252 WAC, identifies the constituents for which standards must be set and complied with if the specific constituent is reasonably expected to be in or derived from the by-product material and has been detected in groundwater. For purposes of this criterion, the property of gross alpha activity will be treated as if it is a hazardous constituent. Thus, when setting standards under subsection (5)(j) of this section, the department will also set a limit for gross alpha activity.

[Statutory Authority: RCW 70.98.050 and 70.98.080. 02-17-005, § 246-252-030, filed 8/8/02, effective 9/8/02. Statutory Authority: RCW 70.98.050. 00-08-013, § 246-252-030, filed 3/24/00, effective 4/24/00; 97-13-055, § 246-252-030, filed 6/16/97, effective 7/17/97; 94-01-073, § 246-252-030, filed 12/9/93, effective 1/9/94. Statutory Authority: RCW 70.98.050 and 70.98.080. 91-16-109 (Order 187), § 246-252-030, filed 8/7/91, effective 9/7/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-52-100, filed 12/11/86. Statutory Authority: Chapter 70.121 RCW. 81-16-031 (Order 1683), § 402-52-100, filed 7/28/81.]

WAC 246-252-040 Continuing dose assessment. Each uranium or thorium milling operation shall submit in writing to the department by May 1 and November 1 of each year, reports specifying the quantities of each of the principle radionuclides released to unrestricted areas in liquid and in gaseous effluent during the previous six months of operations.

(2003 Ed.)

This data shall be reported in a manner that will permit the department to confirm the potential annual radiation doses to the public. All data from the radiological and nonradiological environmental monitoring program will also be submitted for the same time period and frequency as specified above. The data shall be reported in a manner which will allow the department to confirm the potential annual radiation doses to the public. In addition, the report due each May 1 shall include a dose assessment to assure compliance with 40 CFR 190 Environmental Radiation Protection Standards for Nuclear Power Operation and an annual land use survey to include but not be limited to water supply information, location and number of occupants, time spent at each location by occupants, amount and type of locally grown stored feed and amount of pasture consumed by local livestock.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-040, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.121 RCW. 81-16-031 (Order 1683), § 402-52-200, filed 7/28/81.]

WAC 246-252-050 Appendix A.

Hazardous Constituents

Acetonitrile (Ethanenitrile)
 Acetophenone (Ethanone, 1-phenyl)
 3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts (Warfarin)
 2-Acetylaminofluorene (Acetamide, N-(9H-fluorene-2-yl)-)
 Acetyl chloride (Ethanoyl chloride)
 1-Acetyl-2-thiourea (Acetamide, N-(aminothioxomethyl)-)
 Acrolein (2-Propenal)
 Acrylamide (2-Propenamide)
 Acrylonitrile (2-Propenenitrile)
 Aflatoxins
 Aldrin (1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a,8b-hexahydro-endo, exo-1,4:5,8-Dimethanonaphthalene)
 Allyl alcohol (2-Propen-1-ol)
 Aluminum phosphide
 4-Aminobiphenyl ([1,1'-Biphenyl]-4-amine)
 6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methyl-carbamate azirino[2',3':3,4] pyrrolo [1,2-a] indole-4,7-dione, (ester) (Mitomycin C) (Azirino[2'3':3,4] pyrrolo (1,2-a) indole-4,7-dione, 6-amino-8-[(amino-carbonyl)oxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a methoxy-5-methy-)
 5-(Aminomethyl)-3-isoxazolol (3(2H)-Isoxazolone, 5-(aminomethyl)-) 4-Aminopyridine (4-Pyridinamine)
 Amitrole (1H-1,2,4-Triazol-3-amine)
 Aniline (Benzenamine)
 Antimony and compounds, N.O.S.*
 Aramite (Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1-dimethylethyl) phenoxy]-1-methylethyl ester)
 Arsenic and compounds, N.O.S.*
 Arsenic acid (Orthoarsenic acid)
 Arsenic pentoxide (Arsenic (V) oxide)
 Arsenic trioxide (Arsenic (III) oxide)
 Auramine (Benzenamine, 4,4'-carbonimidoylbis [N,N-Dimethyl-, monohydrochloride)
 Azaserine (L-Serine, diazoacetate (ester))
 Barium and compounds, N.O.S.*
 Barium cyanide
 Benz[c]acridine (3,4-Benzacridine)
 Benz[a]anthracene (1,2-Benzanthracene)
 Benzene (Cyclohexatriene)
 Benzenearsonic acid (Arsonic acid, phenyl-)
 Benzene, dichloromethyl- (Benzal chloride)
 Benzenethiol (Thiophenol)
 Benzidine ([1,1'-Biphenyl]-4,4'diamine)
 Benzo[b]fluoranthene (2,3-Benzofluoranthene)
 Benzo[j]fluoranthene (7,8-Benzofluoranthene)
 Benzo[a]pyrene (3,4-Benzopyrene)
 p-Benzoquinone (1,4-Cyclohexadienedione)

[Title 246 WAC—p. 443]

Hazardous Constituents

Benzotrithloride (Benzene, trichloromethyl)
 Benzyl chloride (Benzene, (chloromethyl)-)
 Beryllium and compounds, N.O.S.*
 Bis(2-chloroethoxy)methane (Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-])
 Bis(2-chloroethyl) ether (Ethane, 1,1'-oxybis[2-chloro-])
 N,N-Bis(2-chloroethyl)-2-naphthylamine (Chloronaphazine)
 Bis(2-chloroisopropyl) ether (Propane, 2,2'-oxybis[2-chloro-])
 Bis(chloromethyl) ether (Methane, oxybis[chloro-])
 Bis(2-ethylhexyl) phthalate (1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester)
 Bromoacetone (2-Propanone, 1-bromo-)
 Bromomethane (Methyl bromide)
 4-Bromophenyl phenyl ether (Benzene, 1-bromo-4-phenoxy-)
 Brucine (Strychnidin-10-one, 2,3-dimethoxy-)
 2-Butanone peroxide (Methyl ethyl ketone, peroxide)
 Butyl benzyl phthalate (1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester)
 2-sec-Butyl-4,6-dinitrophenol (DNBP) (Phenol, 2,4-dinitro-6-(1-methylpropyl)-)
 Cadmium and compounds, N.O.S.*
 Calcium chromate (Chromic acid, calcium salt)
 Calcium cyanide
 Carbon disulfide (Carbon bisulfide)
 Carbon oxyfluoride (Carbonyl fluoride)
 Chloral (Acetaldehyde, trichloro-)
 Chlorambucil (Butanoic acid, 4-[bis(2-chloroethyl)amino]benzene-)
 Chlordane (alpha and gamma isomers) (4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3,4,7,7a-tetrahydro-) (alpha and gamma isomers)
 Chlorinated benzenes, N.O.S.*
 Chlorinated ethane, N.O.S.*
 Chlorinated fluorocarbons, N.O.S.*
 Chlorinated naphthalene, N.O.S.*
 Chlorinated phenol, N.O.S.*
 Chloroacetaldehyde (Acetaldehyde, chloro-)
 Chloroalkyl ethers, N.O.S.*
 p-Chloroaniline (Benzenamine, 4-chloro-)
 Chlorobenzene (Benzene, chloro-)
 Chlorobenzilate (Benzenoacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester)
 p-Chloro-m-cresol (Phenol, 4-chloro-3-methyl)
 1-Chloro-2,3-epoxypropane (Oxirane, 2-(chloromethyl)-)
 2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy)-)
 Chloroform (Methane, trichloro-)
 Chloromethane (Methyl chloride)
 Chloromethyl methyl ether (Methane, chloromethoxy-)
 2-Chloronaphthalene (Naphthalene, betachloro-)
 2-Chlorophenol (Phenol, o-chloro-)
 1-(o-Chlorophenyl)thiourea (Thiourea, (2-chlorophenyl)-)
 3-Chloropropionitrile (Propanenitrile, 3-chloro-)
 Chromium and compounds, N.O.S.*
 Chrysene (1,2-Benzphenanthrene)
 Citrus red No. 2 (2-Naphthol, 1-[(2,5-dimethoxyphenyl)azo]-)
 Coal tars
 Copper cyanide
 Creosote (Creosote, wood)
 Cresols (Cresylic acid) (Phenol, methyl-)
 Crotonaldehyde (2-Butenal)
 Cyanides (soluble salts and complexes), N.O.S.*
 Cyanogen (Ethanedinitrile)
 Cyanogen bromide (Bromide cyanide)
 Cyanogen chloride (Chlorine cyanide)
 Cycasin(beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl-)
 2-Cyclohexyl-4,6-dinitrophenol (Phenol, 2-cyclohexyl-4,6-dinitro-)
 Cyclophosphamide (2H-1,3,2, -Oxazaphosphorine, [bis(2-chloroethyl)amino]-tetrahydro-,2-oxide)
 Daunomycin (5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methox y-)
 DDD (Dichlorodiphenyldichloroethane) (Ethane, 1,1-dichloro-2,2-bis(p-chlorophenyl)-)
 DDE (Ethylene, 1,1-dichloro-2,2-bis(4-chlorophenyl)-)
 DDT (Dichlorodiphenyltrichloroethane) (Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)-)

Hazardous Constituents

Diallate (S-(2,3-dichloroallyl) diisopropylthiocarbamate)
 Dibenz[a,h]acridine (1,2,5,6-Dibenzacridine)
 Dibenz[a,j]acridine (1,2,7,8-Dibenzacridine)
 Dibenz[a,h]anthracene (1,2,5,6-Dibenzanthracene)
 7H-Dibenzo[c,g]carbazole (3,4,5,6-Dibenzcarbazole)
 Dibenzo[a,e]pyrene (1,2,4,5-Dibenzpyrene)
 Dibenzo[a,h]pyrene (1,2,5,6-Dibenzpyrene)
 Dibenzo[a,i]pyrene (1,2,7,8-Dibenzpyrene)
 1,2-Dibromo-3-chloropropane (Propane, 1,2-dibromo-3-chloro-)
 1,2-Dibromoethane (Ethylene dibromide)
 Dibromomethane (Methylene bromide)
 Di-n-butyl phthalate (1,2-Benzenedicarboxylic acid, dibutyl ester)
 o-Dichlorobenzene (Benzene, 1,2-dichloro-)
 m-Dichlorobenzene (Benzene, 1,3-dichloro-)
 p-Dichlorobenzene (Benzene, 1,4-dichloro-)
 Dichlorobenzene, N.O.S.* (Benzene, dichloro-, N.O.S.*)
 3,3'-Dichlorobenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-)
 1,4-Dichloro-2-butene (2-Butene, 1,4-dichloro-)
 Dichlorodifluoromethane (Methane, dichlorodifluoro-)
 1,1-Dichloroethane (Ethylidene dichloride)
 1,2-Dichloroethane (Ethylene dichloride)
 trans-1,2-Dichloroethene (1,2-Dichloroethylene)
 Dichloroethylene, N.O.S.* (Ethene, dichloro-, N.O.S.*)
 1,1-Dichloroethylene (Ethene, 1,1-dichloro-)
 Dichloromethane (Methylene chloride)
 2,4-Dichlorophenol (Phenol, 2,4-dichloro-)
 2,6-Dichlorophenol (Phenol, 2,6-dichloro-)
 2,4-Dichlorophenoxyacetic acid (2,4-D), salts and esters (Acetic acid, 2,4-dichlorophenoxy-, salts and esters)
 Dichlorophenylarsine (Phenyl dichloroarsine)
 Dichloropropane, N.O.S.* (Propane, dichloro-, N.O.S.*)
 1,2-Dichloropropane (Propylene dichloride)
 Dichloropropanol, N.O.S.* (Propanol, dichloro-, N.O.S.*)
 Dichloropropene, N.O.S.* (Propene, dichloro-, N.O.S.*)
 1,3-Dichloropropene (1-Propene, 1,3-dichloro-)
 Dieldrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octa-hydroendo, exo-1,4:5,8-Dimethanonaphthalene)
 1,2:3,4-diepoxybutane (2,2'-Bioxirane)
 Diethylarsine (Arsine, diethyl-)
 N,N-Diethylhydrazine (Hydrazine, 1,2-diethyl)
 O,O-Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic acid, O,O-diethyl S-methyl ester)
 O,O-Diethylphosphoric acid, O-p-nitrophenyl ester (Phosphoric acid, diethyl p-nitrophenyl ester)
 Diethyl phthalate (1,2-Benzenedicarboxylic acid, diethyl ester)
 O,O-Diethyl O-2-pyrazinyl phosphorothioate (Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester)
 Diethylstilbestrol (4,4'-Stilbenediol, alpha, alpha-diethyl, bis(dihydrogen phosphate, (E)-)
 Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)
 3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol (1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-)
 Dilsopropylfluorophosphate (DFP) (Phosphorofluoridic acid, bis(1-methyl-ethyl) ester)
 Dimethoate (Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester)
 3,3'-Dimethoxybenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-di-methoxy-)
 p-Dimethylaminoazobenzene (Benzenamine, N,N-dimethyl-4-(phenyl-lazo)-)
 7,12-Dimethylbenz[a]anthracene (1,2-Benzanthracene, 7,12-dimethyl-)
 3,3'-Dimethylbenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-)
 Dimethylcarbamoyl chloride (Carbamoyl chloride, dimethyl-)
 1,1-Dimethylhydrazine (Hydrazine, 1,1-dimethyl-)
 1,2-Dimethylhydrazine (Hydrazine, 1,2-dimethyl-)
 3,3-Dimethyl-1-(methylthio)-2-butanone, O-((methylamino) carbonyl) oxime (Thiofanox)
 alpha, alpha-Dimethylphenethylamine (Ethanamine, 1,1-dimethyl-2-phenyl-)
 2,4-Dimethylphenol (Phenol, 2,4-dimethyl-)
 Dimethyl phthalate (1,2-Benzenedicarboxylic acid, dimethyl ester)
 Dimethyl sulfate (Sulfuric acid, dimethyl ester)
 Dinitrobenzene, N.O.S.* (Benzene, dinitro-, N.O.S.*)
 4,6-Dinitro-o-cresol and salts (Phenol, 2,4-dinitro-6-methyl-, and salts)
 2,4-Dinitrophenol (Phenol, 2,4-dinitro-)

Hazardous Constituents

2,4-Dinitrotoluene (Benzene, 1-methyl-2,4-dinitro-)
 2,6-Dinitrotoluene (Benzene, 1-methyl-2,6-dinitro-)
 Di-n-octyl phthalate (1,2-Benzenedicarboxylic acid, dioctyl ester)
 1,4-Dioxane (1,4-Diethylene oxide)
 Diphenylamine (Benzenamine, N-phenyl-)
 1,2-Diphenylhydrazine (Hydrazine, 1,2-diphenyl-)
 Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)
 Disulfoton (O,O-diethyl S-[2-(ethylthio)ethyl] phosphorodithioate)
 2,4-Dithiobiuret (Thioimidodicarbonic diamide)
 Endosulfan (5-Norbornene, 2,3-dimethanol, 1,4,5,6,7,7-hexachloro-, cyclic sulfite)
 Endrin and metabolites (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene, and metabolites)
 Ethyl carbamate (Urethan) (Carbamic acid, ethyl ester)
 Ethyl cyanide (propanenitrile)
 Ethylenebisdithiocarbamic acid, salts and esters
 (1,2-Ethanediybiscarbamodithioic acid, salts and esters)
 Ethyleneimine (Aziridine)
 Ethylene oxide (Oxirane)
 Ethylenethiourea (2-Imidazolidinethione)
 Ethyl methacrylate (2-Propenoic acid, 2-methyl-, ethyl ester)
 Ethyl methanesulfonate (Methanesulfonic acid, ethyl ester)
 Fluoranthene (Benzo[j,k]fluorene)
 Fluorine
 2-Fluoroacetamide (Acetamide, 2-fluoro-)
 Fluoroacetic acid, sodium salt (Acetic acid, fluoro-, sodium salt)
 Formaldehyde (Methylene oxide)
 Formic acid (Methanoic acid)
 Glycidylaldehyde (1-Propanol-2,3-epoxy)
 Halomethane, N.O.S.*
 Heptachlor (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-)
 Heptachlor epoxide (alpha, beta, and gamma isomers) (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7-tetrahydro-, alpha, beta, and gamma isomers)
 Hexachlorobenzene (Benzene, hexachloro-)
 Hexachlorobutadiene (1,3-Butadiene, 1,1,2,3,4,4-hexachloro-)
 Hexachlorocyclohexane (all isomers) (Lindane and isomers)
 Hexachlorocyclopentadiene (1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-)
 Hexachloroethane (Ethane, 1,1,1,2,2,2-hexachloro-)
 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene (Hexachlorohexa-hydro-endo,endo-dimethanonaphthalene)
 Hexachlorophene (2,2'-Methylenebis(3,4,6-trichlorophenol))
 Hexachloropropene (1-Propene, 1,1,2,3,3,3-hexachloro-)
 Hexaethyl tetraphosphate (Tetraphosphoric acid, hexaethyl ester)
 Hydrazine (Diamine)
 Hydrocyanic acid (Hydrogen cyanide)
 Hydrofluoric acid (Hydrogen fluoride)
 Hydrogen sulfide (Sulfur hydride)
 Hydroxydimethylarsine oxide (Cacodylic acid)
 Indeno (1,2,3-cd)pyrene (1,10-(1,2-phenylene)pyrene)
 Iodomethane (Methyl iodide)
 Iron dextran (Ferric dextran)
 Isocyanic acid, methyl ester (Methyl isocyanate)
 Isobutyl alcohol (1-Propanol, 2-methyl-)
 Isosafrole (Benzene, 1,2-methylenedioxy-4-allyl-)
 Kepone (Decachlorooctahydro-1,3,4-Methano-2H-cyclobuta[cd]pentalen-2-one)
 Lasiocarpine (2-Butenoic acid, 2-methyl-, 7-[(2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester)
 Lead and compounds, N.O.S.*
 Lead acetate (Acetic acid, lead salt)
 Lead phosphate (Phosphoric acid, lead salt)
 Lead subacetate (Lead, bis(acetato-0)tetrahydroxytri-)
 Maleic anhydride (2,5-Furandione)
 Maleic hydrazide (1,2-Dihydro-3,6-pyridazinedione)
 Malononitrile (Propanedinitrile)
 Melphalan (Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-,L-)
 Mercury fulminate (Fulminic acid, mercury salt)
 Mercury and compounds, N.O.S.*
 Methacrylonitrile (2-Propenenitrile, 2-methyl-)

Hazardous Constituents

Methanethiol (Thiomethanol)
 Methapyriline (Pyridine, 2-[(2-dimethylamino)ethyl]-2-thenylamino-)
 Metholmyl (Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester)
 Methoxychlor (Ethane, 1,1,1-trichloro-2,2'-bis(p-methoxyphenyl)-)
 2-Methylaziridine (1,2-Propylenimine)
 3-Methylcholanthrene (Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-)
 Methyl chlorocarbonate (Carbonochloridic acid, methyl ester)
 4,4'-Methylenebis(2-chloroaniline) (Benzenamine, 4,4'-methylenebis(2-chloro-))
 Methyl ethyl ketone (MEK) (2-Butanone)
 Methyl hydrazine (Hydrazine, methyl-)
 2-Methylacetonitrile (Propanenitrile, 2-hydroxy-2-methyl-)
 Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)
 Methyl methanesulfonate (Methanesulfonic acid, methyl ester)
 2-Methyl-2-(methylthio)propionaldehyde-o-(methylcarbonyl) oxime (Propanal, 2-methyl-2-(methylthio)-, 0-[(methylamino)carbonyl]oxime)
 N-Methyl-N'-nitro-N-nitrosoguanidine (Guanidine, N-nitroso-N-methyl-N'-nitro-)
 Methyl parathion (0,0-dimethyl 0-(4-nitrophenyl) phosphorothioate)
 Methylthiouracil (4-1H-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-)
 Molybdenum and compounds, N.O.S.*
 Mustard gas (Sulfide, bis(2-chloroethyl)-)
 Naphthalene
 1,4-Naphthoquinone (1,4-Naphthalenedione)
 1-Naphthylamine (alpha-Naphthylamine)
 2-Naphthylamine (beta-Naphthylamine)
 1-Naphthyl-2-thiourea (Thiourea, 1-naphthalenyl-)
 Nickel and compounds, N.O.S.*
 Nickel carbonyl (Nickel tetracarbonyl)
 Nickel cyanide (Nickel (II) cyanide)
 Nicotine and salts (Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts)
 Nitric oxide (Nitrogen (II) oxide)
 p-Nitroaniline (Benzenamine, 4-nitro-)
 Nitrobenzene (Benzene, nitro-)
 Nitrogen dioxide (Nitrogen (IV) oxide)
 Nitrogen mustard and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)
 Nitrogen mustard N-Oxide and hydrochloride salt (Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)
 Nitroglycerine (1,2,3-Propanetriol, trinitrate)
 4-Nitrophenol (Phenol, 4-nitro-)
 4-Nitroquinoline-1-oxide (Quinoline, 4-nitro-1-oxide-)
 Nitrosamine, N.O.S.*
 N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)
 N-Nitrosodiethanolamine (Ethanol, 2,2'-(nitrosoimino)bis-)
 N-Nitrosodiethylamine (Ethanamine, N-ethyl-N-nitroso-)
 N-Nitrosodimethylamine (Dimethylnitrosamine)
 N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)
 N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)
 N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)
 N-Nitroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)
 N-Nitrosomethylvinylamine (Ethanamine, N-methyl-N-nitroso-)
 N-Nitrosomorpholine (Morpholine, N-nitroso-)
 N-Nitrososarcosine (Sarcosine, N-nitroso-)
 N-Nitrosopiperidine (Pyridine, hexahydro-, N-nitroso-)
 Nitrosopyrrolidine (Pyrrole, tetrahydro-, N-nitroso-)
 N-Nitrososarcosine (Sarcosine, N-nitroso-)
 5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)
 Octamethylpyrophosphoramide (Diphosphoramidate, octamethyl-)
 Osmium tetroxide (Osmium (VIII) oxide)
 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid (Endothal)
 Paraldehyde (1,3,5-Trioxane, 2,4,6-trimethyl-)
 Parathion (Phosphorothioic acid, 0,0-diethyl 0-(p-nitrophenyl)ester)
 Pentachlorobenzene (Benzene, pentachloro-)
 Pentachloroethane (Ethane, pentachloro-)
 Pentachloronitrobenzene (PCNB) (Benzene, pentachloronitro-)
 Pentachlorophenol (Phenol, pentachloro-)
 Phenacetin (Acetamide, N-(4-ethoxyphenyl)-)
 Phenol (Benzene, hydroxy-)
 Phenylenediamine (Benzenediamine)
 Phenylmercury acetate (Mercury, acetatophenyl-)
 N-Phenylthiourea (Thiourea, phenyl-)
 Phosgene (Carbonyl chloride)
 Phosphine (Hydrogen phosphide)

Hazardous Constituents

Phosphorodithioic acid, 0,0-diethyl S-[(ethylthio)methyl] ester (Phorate)
 Phosphorothioic acid, 0,0-dimethyl O-[p-((dimethylamino)sulfonyl)phenyl] ester (Famphur)
 Phthalic acid esters, N.O.S.* (Benzene, 1, 2-dicarboxylic acid, esters, N.O.S.*)
 Phthalic anhydride (1,2-Benzenedicarboxylic acid anhydride)
 2-Picoline (Pyridine, 2-methyl-)
 Polychlorinated biphenyl, N.O.S.*
 Potassium cyanide
 Potassium silver cyanide (Argentate(1-), dicyano-, potassium)
 Pronamide (3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide)
 1,3-Propane sultone (1,2-Oxathiolane, 2,2-dioxide)
 n-Propylamine (1-Propanamine)
 Propylthiouracil (Undecamethylenediamine, N,N'-bis(2-chlorobenzyl)-, dihydrochloride)
 2-Propyn-1-ol (Propargyl alcohol)
 Pyridine
 Radium -226 and -228
 Reserpine (Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[3,4,5-trimethoxybenzoyloxy]-, methyl ester)
 Resorcinol (1,3-Benzenediol)
 Saccharin and salts (1,2-Benzoisothiazolin-3-one, 1,1-dioxide, and salts)
 Safrole (Benzene, 1,2-methylenedioxy-4-allyl-)
 Selenious acid (Selenium dioxide)
 Selenium and compounds, N.O.S.*
 Selenium sulfide (Sulfur selenide)
 Selenourea (Carbamimidoseleonic acid)
 Silver and compounds, N.O.S.*
 Silver cyanide
 Sodium cyanide
 Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitro-soureido)-)
 Strontium sulfide
 Strychnine and salts (Strychnidin-10-one, and salts)
 1,2,4,5-Tetrachlorobenzene (Benzene, 1,2,4,5-tetrachloro-)
 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (Dibenzo-p-dioxin, 2,3,7,8-tetrachloro-)
 Tetrachloroethane, N.O.S.* (Ethane, tetrachloro-, N.O.S.*)
 1,1,1,2-Tetrachlorethane (Ethane, 1,1,1,2-tetrachloro-)
 1,1,2,2-Tetrachlorethane (Ethane, 1,1,2,2-tetrachloro-)
 Tetrachloroethane (Ethane, 1,1,2,2-tetrachloro-)
 Tetrachloromethane (Carbon tetrachloride)
 2,3,4,6-Tetrachlorophenol (Phenol, 2,3,4,6-tetrachloro-)
 Tetraethyldithiopyrophosphate (Dithiopyrophosphoric acid, tetraethyl-ester)
 Tetraethyl lead (Plumbane, tetraethyl-)
 Tetraethylpyrophosphate (Pyrophosphoric acid, tetraethyl ester)
 Tetranitromethane (Methane, tetranitro-)
 Thallium and compounds, N.O.S.*
 Thallous oxide (Thallium (III) oxide)
 Thallium (I) acetate (Acetic acid, thallium (I) salt)
 Thallium (I) carbonate (Carbonic acid, dithallium (I) salt)
 Thallium (I) chloride
 Thallium (I) nitrate (Nitric acid, thallium (I) salt)
 Thallium selenite
 Thallium (I) sulfate (Sulfuric acid, thallium (I) salt)
 Thioacetamide (Ethanethioamide)
 Thiosemicarbazide (Hydrazinecarbothioamide)
 Thiourea (Carbamide thio-)
 Thiuram (Bis(dimethylthiocarbamoyl) disulfide)
 Thorium and compounds, N.O.S.*, when producing thorium by-product material
 Toluene (Benzene, methyl-)
 Toluenediamine (Diaminotoluene)
 o-Toluidine hydrochloride (Benzenamine, 2-methyl-, hydrochloride)
 Toluene diisocyanate (Benzene, 1,3-diisocyanatomethyl-)
 Toxaphene (Camphene, octachloro-)
 Tribromomethane (Bromoform)
 1,2,4-Trichlorobenzene (Benzene, 1,2,4-trichloro-)
 1,1,1-Trichloroethane (Methyl chloroform)
 1,1,2-Trichloroethane (Ethane, 1,1,2-trichloro-)
 Trichloroethene (Trichloroethylene)
 Trichloromethanethiol (Methanethiol, trichloro-)
 Trichloromonofluoromethane (Methane, trichlorofluoro-)
 2,4,5-Trichlorophenol (Phenol, 2,4,5-trichloro-)
 2,4,6-Trichlorophenol (Phenol, 2,4,6-trichloro-)

Hazardous Constituents

2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) (Acetic acid, 2,4,5-trichlorophenoxy-)
 2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) (Silvex) (Propionic acid, 2-(2,4,5-trichlorophenoxy)-)
 Trichloropropane, N.O.S.* (Propane, trichloro-, N.O.S.*)
 1,2,3-Trichloropropane (Propane, 1,2,3-trichloro-)
 0,0,0-Triethyl phosphorothioate (Phosphorothioic acid, 0,0,0-triethyl ester)
 sym-Trinitrobenzene (Benzene, 1,3,5-trinitro-)
 Tris(1-aziridinyl) phosphine sulfide (Phosphine sulfide, tris(1-aziridinyl-))
 Tris(2,3-dibromopropyl) phosphate (1-Propanol, 2,3-dibromo-, phosphate)
 Trypan blue (2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl (1,1'-biphenyl)- 4,4'-diyl)bis(azo)]bis(5-amino-4-hydroxy-, tetrasodium salt)
 Uracil mustard (Uracil 5-[bis(2-chloroethyl)amino]-)
 Uranium and compounds, N.O.S.*
 Vanadic acid, ammonium salt (ammonium vanadate)
 Vanadium pentoxide (Vanadium (V) oxide)
 Vinyl chloride (Ethene, chloro-)
 Zinc cyanide
 Zinc phosphide

* The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this list.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-252-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-52-300, filed 12/11/86.]

Reviser's note: The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.

Chapter 246-254 WAC

RADIATION PROTECTION—FEES

WAC

246-254-001	Purpose and scope.
246-254-010	Definitions.
246-254-020	Payment of fees.
246-254-030	Small business discount provision and optional fee payment schedule applicable to radioactive materials licensees.
246-254-040	Denial, revocation, suspension, and reinstatement.
246-254-050	Method of payment.
246-254-053	Radiation machine facility registration fees.
246-254-070	Fees for specialized radioactive material licenses.
246-254-080	Fees for medical and veterinary radioactive material licenses.
246-254-090	Fees for industrial radioactive material licenses.
246-254-100	Fees for laboratory radioactive material licenses.
246-254-110	Fees for reciprocity.
246-254-120	Fees for licensing and compliance actions.
246-254-130	Radioactive waste disposal site surveillance fee.
246-254-140	Fees for uranium, thorium and other mineral processors.
246-254-150	Fees for perpetual care and maintenance.
246-254-160	Fees for airborne emissions of radioactive materials.
246-254-170	Failure by applicant or licensee to pay prescribed fees.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-254-057	License fees for radioactive materials. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-057, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20A.055. 87-21-016 (Order 2545), § 440-44-057, filed 10/9/87; 86-08-054 (Order 2359), § 440-44-057, filed 3/28/86; 85-13-007 (Order 2238), § 440-44-057, filed 6/7/85; 85-06-024 (Order 2209), § 440-44-057, filed 2/27/85. Statutory Authority: RCW 70.98.080. 83-24-014 (Order 2050), § 440-44-057, filed 11/30/83. Statutory Authority: RCW 43.20A.055. 83-12-058 (Order 1965), § 440-44-057, filed 6/1/83. Statutory Authority: 1982 c 201. 82-17-021 (Order 1860), § 440-44-057, filed 8/9/82.] Repealed by 91-22-027 (Order 208), filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.110.
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- 246-254-058 Fees for additional service. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-254-058, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20A.055, 85-13-007 (Order 2238), § 440-44-058, filed 6/7/85.] Repealed by 91-22-027 (Order 208), filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.110.
- 246-254-999 Site use permit fee. [Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-254-999, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW and 1985 c 383, 85-20-021 (Order 2283), § 440-44-060, filed 9/23/85. Statutory Authority: RCW 43.20A.055, 83-12-058 (Order 1965), § 440-44-060, filed 6/1/83.] Repealed by 91-22-027 (Order 208), filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.110.

WAC 246-254-001 Purpose and scope. This chapter establishes fees charged for licensing, permitting, registration, and inspection services rendered by the division of radiation protection as authorized under chapters 43.70, 70.98, and 70.121 RCW. These fees apply to owners and operators of radiation generating machines, users of radioactive material, operators of low-level radioactive waste disposal facilities, owners and operators of facilities emitting airborne radioactivity, and owners and operators of certain mineral processing and uranium or thorium milling operations and their associated tailings or waste.

[Statutory Authority: RCW 43.70.110, 91-22-027 (Order 208), § 246-254-001, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-254-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-70-010, filed 12/11/86; 79-12-073 (Order 1459), § 402-70-010, filed 11/30/79, effective 1/1/80.]

WAC 246-254-010 Definitions. As used in this chapter, the following definitions apply:

- (1) "Application" means a completed RHF-1 or equivalent with supporting documentation requesting the department to grant authority to receive, possess, use, transfer, own or acquire radioactive material.
- (2) "Compliance inspection" means a routinely scheduled visit to the licensee's facility and/or temporary job site(s) for the purpose of determining compliance with the radioactive material license and applicable regulations. This service is covered by the annual fee for the radioactive material license.
- (3) "Department" means the department of health which has been designated as the state radiation control agency.
- (4) "Direct staff time" means all work time directly applicable to or associated with a specific radioactive material licensee and includes license file review, inspection preparation, on-site visits, report writing, review and acknowledgement of correspondence, review of license applications, renewals and amendment requests, telephone contacts, and staff or management conferences specifically related to the license. Travel time is not considered direct staff time.
- (5) "Emission unit" means the point of release of airborne emissions of radioactive material.
- (6) "Environmental cleanup monitoring" means an on-site visit by the department to a licensee's facility or site of operation to determine the status of corrective actions to remove environmental radiation contamination resulting from the licensee's operation. Such a monitoring visit may include, but is not limited to, the review of the licensee's

records pertaining to the environmental cleanup, observation of the licensee's cleanup work, sampling by the department for analysis, associated laboratory work, and the analysis of the information collected by the department.

(7) "Facility" means all buildings, structures and operations on one contiguous site.

(8) "Follow-up inspection" means an on-site visit to a licensee's facility to verify that prompt action was taken to correct significant items of noncompliance found by the department in a previous inspection. The first follow-up inspection is covered by the annual fee for the radioactive material license.

(9) "Inspection" means an official examination or observation by the department including but not limited to tests, surveys and monitoring to determine compliance with rules, regulations, orders, requirements and conditions of the department.

(10) "Investigation" means an on-site visit to a licensee's facility or site of operation when, in the department's judgment, it is required for the purpose of reviewing specific conditions, allegations, or other information regarding unusual conditions, operations, or practices. This service is covered by the annual fee for the radioactive material license.

(11) "License" means a license issued by the department in accordance with the regulations adopted by the department.

(12) "New license application" means a request to use radioactive material from a person not currently a licensee or from a current licensee requesting authorization to use radioactive material in a new way such that a change of fee category is required.

(13) "Perpetual care and maintenance" means further maintenance, surveillance or other care of milling or tailings impoundment sites after termination of the site operator's decommissioning responsibilities and license.

(14) "Registration" means registration with the department by any person possessing a source of ionizing radiation in accordance with regulations adopted by the department.

(15) "Sealed source and device evaluation" means a radiological safety evaluation performed by the department on the design, manufacture, and test data of any single sealed source and/or device model for the purpose of registering the sealed source or device with the United States Nuclear Regulatory Commission.

[Statutory Authority: RCW 43.70.110, 91-22-027 (Order 208), § 246-254-010, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040, 91-02-049 (Order 121), recodified as § 246-254-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080, 87-01-031 (Order 2450), § 402-70-020, filed 12/11/86; 79-12-073 (Order 1459), § 402-70-020, filed 11/30/79, effective 1/1/80.]

WAC 246-254-020 Payment of fees. (1) Applicants, licensees, permittees, and registrants requesting or receiving licenses, permits, registrations, and actions or services by the department shall pay the applicable fee or fees for the license, permit, registration, and action or service provided by the department.

- (2) The department shall charge a fee for each:
 - (a) Radiation machine facility registration;
 - (b) Radioactive material license;

(c) Service or action with respect to a radioactive material licensee not otherwise covered by fees;

(d) Cubic foot of low-level radioactive waste volume received at a commercial disposal site;

(e) Kilogram of uranium or thorium milled from ore; and

(f) Air emission permit.

(3) The department shall charge a fee for each radioactive material license based on the single highest fee category describing activities subject to the conditions of the license.

(4) The department shall charge the applicable license fee for each category when multiple licenses are required.

(5) The department may require multiple radioactive material licenses based upon:

(a) Physical separation of operations;

(b) Organizational separations within a licensee's operation;

(c) Complexity of uses of radioactive material such that two or more fee categories would apply to the operation.

(6) Each licensee, permittee, or registrant shall:

(a) Remit the full fee (i) at the fee rate established by rule at the time such fee is paid, and (ii) at least thirty days prior to the annual anniversary date for licensees or the biennial expiration date for registrants or (iii) on a payment schedule as provided in WAC 246-254-030.

(b) Consider the annual anniversary to be the month and day of the expiration date of the existing radioactive material license.

(7) The department shall refund one-half of the fee if an application is withdrawn prior to issuance of a radioactive material license.

(8) If there is a change by the applicant, licensee, permittee or registrant resulting in a higher fee category, the applicant, licensee, permittee, or registrant shall pay an additional fee prorated for the remainder of the fee interval.

(9) Each licensee, permittee, or registrant shall remit the full amount of any quarterly billing or individual billing for licensing or compliance actions within thirty days of receipt of the bill.

(10) Fees due on or after the effective date of these regulations shall be at the rate prescribed in this chapter.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-020, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-70-030, filed 12/11/86; 79-12-073 (Order 1459), § 402-70-030, filed 11/30/79, effective 1/1/80.]

WAC 246-254-030 Small business discount provision and optional fee payment schedule applicable to radioactive materials licensees. (1) Small business may receive a twenty-five percent discount on radioactive materials license fees specified in WAC 246-254-070, 246-254-080, 246-254-090, and 246-254-100.

(2) To qualify for the discount, the business shall:

(a) Be a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit;

(b) Be independently owned and operated from all other businesses (i.e., not a subsidiary of a parent company); and

(c) Have fifty or fewer employees.

[Title 246 WAC—p. 448]

(3) To receive the discount, the license applicant at the time of initial license request, or the licensee at the time of annual billing shall:

(a) Certify, on the business' letterhead or appropriate departmental form, the business meets the conditions in subsection (2) of this section;

(b) Sign the certification as the chief executive officer of the business or as an official designee;

(c) Have the certification notarized;

(d) Enclose the payment with the certification; and

(e) Submit the certification and payment in accordance with instructions provided by the department.

(4) The department may verify certifications and will suspend any radioactive materials license if the applicant/licensee:

(a) Failed to pay the required fee; or

(b) Made an invalid or false certification.

(5) Upon request of any radioactive materials licensee or license applicant, the department may accept semiannual or quarterly payments in lieu of the required annual license fee, provided:

(a) A written payment schedule setting specific due dates and payment amounts is submitted; and

(b) The total payments per the schedule equal the fee in effect at the time such fee payment schedule is accepted by the department.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-030, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20A.055. 86-12-039 (Order 2382), § 440-44-059, filed 5/30/86.]

WAC 246-254-040 Denial, revocation, suspension, and reinstatement. The department shall:

(1) Deny an application if the appropriate fee is not received;

(2) Suspend or revoke a license, permit, or registration if a required fee is not received;

(3) Refund no fees if a license, permit or registration is denied, revoked, or suspended;

(4) Require reapplication for a license, permit, or registration after denial or revocation including fees as required under this chapter.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-040, filed 10/29/91, effective 11/29/91.]

WAC 246-254-050 Method of payment. Licensees, permittees and registrants shall:

(1) Submit fee payments by check, draft or money order made payable to the department of health; and

(2) Include fee payment with the application for license or submit the fee by mail, in person, or by courier to the address provided in the bill or bill correspondence.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-050, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-70-050, filed 12/11/86; 79-12-073 (Order 1459), § 402-70-050, filed 11/30/79, effective 1/1/80.]

(2003 Ed.)

WAC 246-254-053 Radiation machine facility registration fees. (1) Radiation machine facility fees apply to each person or facility owning, leasing and using radiation-producing machines.

FEE TYPE	FEE
(a) Annual Base Registration Fee	\$48
(b) Late registration or re-registration	\$48
(c) Tube Fees	See Table 1

**TABLE 1
Radiation Tube Fees**

Group	First Tube	Each Additional Tube
(i) Group A: Dental, Podiatric, Veterinary uses	\$49	\$25
(ii) Group B: Hospital, Medical, Chiropractic uses	\$135	\$70
(iii) Group C: Industrial, research, and other uses	\$75	\$25
(iv) Group D: Electron Microscopes, Mammographic X-ray Machines	NA	NA

(2) X-ray shielding fees.

(a) Facilities regulated under the shielding plan requirements of WAC 246-225-030 or 246-227-150 are subject to a \$90 X-ray shielding review fee for each X-ray room plan submitted.

(b) If a facility regulated under WAC 246-225-030 or 246-227-150 operates without submittal of X-ray shielding calculations and a floor plan it will be subject to a shielding design follow-up fee of \$48.

(3) **Radiation safety fee.** If a facility or group of facilities under one administrative control employs two or more full-time individuals whose positions are entirely devoted to in-house radiation safety, the facility shall pay a flat, annual fee of \$3,100.

(4) **Consolidation of registration.** Facilities may consolidate X-ray machine registrations into a single registration after notifying the department in writing and documenting that a single business license applies.

(5) Inspection fees.

(a) The cost of routine, periodic inspections, including the initial inspection, are covered under the base fee and tube registration fees as described in subsection (1) of this section.

(b) Facilities requiring follow-up inspections due to uncorrected noncompliances must pay an inspection follow-up fee of \$90.

[Statutory Authority: RCW 43.70.250 and 2001 2nd sp.s. c 7 § 220. 02-07-085, § 246-254-053, filed 3/19/02, effective 4/19/02. Statutory Authority: RCW 43.70.110. 01-14-048, § 246-254-053, filed 6/29/01, effective 7/30/01; 99-13-085, § 246-254-053, filed 6/14/99, effective 7/15/99; 98-11-066, § 246-254-053, filed 5/19/98, effective 7/1/98. Statutory Authority: RCW 43.70.110, 43.70.250 and chapter 70.98 RCW. 98-01-047, § 246-254-053,

filed 12/8/97, effective 1/8/98; 96-11-043, § 246-254-053, filed 5/8/96, effective 6/28/96; 95-12-004, § 246-254-053, filed 5/25/95, effective 6/25/95; 94-11-010, § 246-254-053, filed 5/5/94, effective 6/5/94; 93-13-019 (Order 372), § 246-254-053, filed 6/8/93, effective 7/9/93. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-053, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-053, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20B.110. 89-16-064 (Order 2839), § 440-44-050, filed 7/31/89, effective 8/31/89. Statutory Authority: RCW 43.20A.055. 86-08-054 (Order 2359), § 440-44-050, filed 3/28/86. Statutory Authority: Chapter 70.98 RCW and 1985 c 383. 85-20-021 (Order 2283), § 440-44-050, filed 9/23/85. Statutory Authority: RCW 43.20A.055. 85-13-007 (Order 2238), § 440-44-050, filed 6/7/85; 83-12-058 (Order 1965), § 440-44-050, filed 6/1/83. Statutory Authority: 1982 c 201. 82-13-011 (Order 1825), § 440-44-050, filed 6/4/82.]

WAC 246-254-070 Fees for specialized radioactive material licenses. (1) Persons licensed or authorized to possess or use radioactive material in the following special categories shall forward annual fees to the department as follows:

(a) Five thousand three hundred eighty dollars for operation of a single nuclear pharmacy.

(b) Nine thousand one hundred seventy-five dollars for operation of a single nuclear laundry.

(c) Nine thousand one hundred seventy-five dollars for a license authorizing a single facility to use more than one curie of unsealed radioactive material in the manufacture and distribution of radioactive products or devices containing radioactive material.

(d) Three thousand two hundred twenty dollars for a license authorizing a single facility to use less than or equal to one curie of unsealed radioactive material or any quantity of previously sealed sources in the manufacture and distribution of products or devices containing radioactive material.

(e) Eight hundred thirty-five dollars for a license authorizing the receipt and redistribution from a single facility of manufactured products or devices containing radioactive material.

(f) Six thousand one hundred fifty-five dollars for a license authorizing decontamination services operating from a single facility.

(g) Two thousand nine hundred fifteen dollars for a license authorizing waste brokerage including the possession, temporary storage at a single facility, and over-packing only of radioactive waste.

(h) One thousand three hundred dollars for a license authorizing equipment servicing involving:

(i) Incidental use of calibration sources;

(ii) Maintenance of equipment containing radioactive material; or

(iii) Possession of sealed sources for purpose of sales demonstration only.

(i) Two thousand four hundred thirty dollars for a license authorizing health physics services, leak testing, or calibration services.

(j) One thousand five hundred twenty dollars for a civil defense license.

(k) Four hundred sixty dollars for a license authorizing possession of special nuclear material as pacemakers or depleted uranium as shielding.

(2) Persons licensed or authorized to possess and use radioactive material in the following broad scope categories shall forward annual fees to the department as follows:

(a) Eighteen thousand two hundred ten dollars for a license authorizing possession of atomic numbers three through eighty-three with maximum authorized possession of any single isotope greater than one curie.

(b) Eight thousand four hundred fifteen dollars for a license authorizing possession of atomic numbers three through eighty-three with maximum authorized possession of any single isotope greater than 0.1 curie but less than or equal to one curie.

(c) Six thousand seven hundred sixty-five dollars for a license authorizing possession of atomic numbers three through eighty-three with maximum authorized possession less than or equal to 0.1 curie.

(3) Persons licensed or authorized to possess or use radioactive material which are not covered by any of the annual license fees described in WAC 246-254-070 through 246-254-100, shall pay fees as follows:

(a) An initial application fee of one thousand dollars;

(b) Billing at the rate of one hundred dollars for each hour of direct staff time associated with issuing and maintaining the license and for the inspection of the license; and

(c) Any fees for additional services as described in WAC 246-254-120.

(d) The initial application fee will be considered a credit against billings for direct staff charges but is otherwise non-refundable.

(4) Persons licensed or authorized to possess or use radioactive material in a facility for radioactive waste processing, including resource recovery, volume reduction, decontamination activities, or other waste treatment, but not permitting commercial on-site disposal, shall pay fees as follows:

(a) A nonrefundable initial application fee for a new license of sixteen thousand dollars which shall be credited to the applicant's quarterly billing described in (b) of this subsection; and

(b) Quarterly billings for actual direct and indirect costs incurred by the department including, but not limited to, license renewal, license amendments, compliance inspections, a resident inspector for time spent on the licensee's premises as deemed necessary by the department, laboratory and other support services, and travel costs associated with staff involved in the foregoing.

[Statutory Authority: RCW 43.70.250, 43.270.040, and 2001 2nd sp.s. c 7 § 220. 02-04-025, § 246-254-070, filed 1/24/02, effective 2/24/02. Statutory Authority: RCW 70.98.080. 01-14-046, § 246-254-070, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 43.70.250. 00-02-016, § 246-254-070, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-254-070, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.70.110. 98-11-067, § 246-254-070, filed 5/19/98, effective 6/19/98. Statutory Authority: RCW 43.70.110, [43.70.]250 and chapter 70.98 RCW. 96-11-043, § 246-254-070, filed 5/8/96, effective 6/28/96; 95-12-004, § 246-254-070, filed 5/25/95, effective 6/25/95; 94-11-011 § 246-254-070, filed 5/5/94, effective 6/5/94; 93-13-019 (Order 372), § 246-254-070, filed 6/8/93, effective 7/9/93. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-070, filed 10/29/91, effective 11/29/91.]

WAC 246-254-080 Fees for medical and veterinary radioactive material licenses. (1) Persons licensed or authorized to possess or use radioactive material in the following medical or veterinary categories shall forward annual fees to the department as follows:

[Title 246 WAC—p. 450]

(a) Four thousand five hundred fifty dollars for operation of a mobile nuclear medicine program from a single base of operation.

(b) Three thousand three hundred twenty dollars for a license authorizing groups II and III of WAC 246-235-120 for diagnostic nuclear medicine at a single facility.

(c) Two thousand eight hundred seventy-five dollars for a license authorizing groups IV and V of WAC 246-235-120 for medical therapy at a single facility.

(d) Four thousand five hundred seventy-five dollars for a license authorizing groups II or III and groups IV or V of WAC 246-235-120 for full diagnostic and therapy services at a single facility.

(e) Two thousand four hundred sixty dollars for a license authorizing group VI of WAC 246-235-120 for brachytherapy at a single facility.

(f) One thousand five hundred twenty dollars for a license authorizing brachytherapy or gamma stereotactic therapy or teletherapy at a single facility.

(g) Two thousand three hundred fifteen dollars for a license authorizing medical or veterinary possession of greater than two hundred millicuries total possession of radioactive material at a single facility.

(h) One thousand eight hundred forty dollars for a license authorizing medical or veterinary possession of greater than thirty millicuries but less than or equal to two hundred millicuries total possession of radioactive material at a single facility.

(i) One thousand three hundred fifty-five dollars for a license authorizing medical or veterinary possession of less than or equal to thirty millicuries total possession of radioactive material at a single facility.

(j) One thousand one hundred ninety dollars for a license authorizing group I as defined in WAC 246-235-120 or in vitro uses of radioactive material at a single facility.

(k) Seven hundred forty-five dollars for a license authorizing medical or veterinary possession of a sealed source for diagnostic use at a single facility.

(2) Persons with licenses authorizing multiple locations of use shall increase the annual fee by fifty percent for each additional location or base of operation.

[Statutory Authority: RCW 43.70.250, 43.270.040, and 2001 2nd sp.s. c 7 § 220. 02-04-025, § 246-254-080, filed 1/24/02, effective 2/24/02. Statutory Authority: RCW 70.98.080. 01-14-046, § 246-254-080, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 43.70.250. 00-02-016, § 246-254-080, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-254-080, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.70.110. 98-11-067, § 246-254-080, filed 5/19/98, effective 6/19/98. Statutory Authority: RCW 43.70.110, [43.70.]250 and chapter 70.98 RCW. 96-11-043, § 246-254-080, filed 5/8/96, effective 6/28/96; 95-12-004, § 246-254-080, filed 5/25/95, effective 6/25/95; 94-11-011 § 246-254-080, filed 5/5/94, effective 6/5/94; 93-13-019 (Order 372), § 246-254-080, filed 6/8/93, effective 7/9/93. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-080, filed 10/29/91, effective 11/29/91.]

WAC 246-254-090 Fees for industrial radioactive material licenses. (1) Persons licensed or authorized to possess or use radioactive material in the following industrial categories shall forward annual fees to the department as follows:

(a) Five thousand three hundred sixty dollars for a license authorizing the use of radiographic exposure devices

(2003 Ed.)

in one or more permanent radiographic vaults in a single facility.

(b) Seven thousand one hundred eighty dollars for a license authorizing the use of radiographic exposure devices at temporary job sites but operating from a single storage facility.

(c) Three thousand five hundred twenty dollars for a license authorizing well-logging activities including the use of radioactive tracers operating from a single storage facility.

(d) Seven hundred sixty dollars for a license authorizing possession of portable sealed sources including moisture/density gauges and excluding radiographic exposure devices operating from a single storage facility.

(e) Eight hundred thirty-five dollars for a license authorizing possession of any nonportable sealed source, including special nuclear material and excluding radioactive material used in a gas chromatograph at a single facility.

(f) Five hundred twenty-five dollars for a license authorizing possession of gas chromatograph units containing radioactive material at a single facility.

(g) One thousand four hundred fifty dollars for a license authorizing possession of any self-shielded or pool type irradiator with sealed source total quantity greater than one hundred curies at a single facility.

(h) Seven thousand six hundred eighty dollars for a license authorizing possession of sealed sources for a walk-in type irradiator at a single facility.

(i) Six thousand six hundred eighty-five dollars for a license authorizing possession of greater than one gram of unsealed special nuclear material or greater than five hundred kilograms of source material at a single facility.

(j) Two thousand one hundred forty dollars for a license authorizing possession of less than or equal to one gram of unsealed special nuclear material or five hundred kilograms of source material at a single facility.

(k) Three hundred forty dollars for a license authorizing possession of static elimination devices not covered by a general license.

(2) Persons with licenses authorizing multiple locations of permanent storage shall increase the annual fee by fifty percent for each additional location.

(3) Depleted uranium registrants required to file Form RHF-20 shall forward an annual fee of seventy dollars to the department.

[Statutory Authority: RCW 43.70.250, 43.270.040, and 2001 2nd sp.s. c 7 § 220. 02-04-025, § 246-254-090, filed 1/24/02, effective 2/24/02. Statutory Authority: RCW 70.98.080. 01-14-046, § 246-254-090, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 43.70.250. 00-02-016, § 246-254-090, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-254-090, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.70.110. 98-11-067, § 246-254-090, filed 5/19/98, effective 6/19/98. Statutory Authority: RCW 43.70.110, [43.70.]250 and chapter 70.98 RCW. 96-11-043, § 246-254-090, filed 5/8/96, effective 6/28/96; 95-12-004, § 246-254-090, filed 5/25/95, effective 6/25/95; 94-11-011 § 246-254-090, filed 5/5/94, effective 6/5/94; 93-13-019 (Order 372), § 246-254-090, filed 6/8/93, effective 7/9/93. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-090, filed 10/29/91, effective 11/29/91.]

WAC 246-254-100 Fees for laboratory radioactive material licenses. (1) Persons licensed or authorized to possess or use unsealed radioactive material in the following lab-

(2003 Ed.)

oratory categories shall forward annual fees to the department as follows:

(a) Three thousand six hundred sixty dollars for a license authorizing possession at a single facility of unsealed sources in amounts greater than:

(i) One millicurie of I-125 or I-131; or

(ii) One hundred millicuries of H-3 or C-14; or

(iii) Ten millicuries of any single isotope.

(b) One thousand eight hundred fifteen dollars for a license authorizing possession at a single facility of unsealed sources in amounts:

(i) Greater than 0.1 millicurie and less than or equal to one millicurie of I-125 or I-131; or

(ii) Greater than ten millicuries and less than or equal to one hundred millicuries of H-3 or C-14; or

(iii) Greater than one millicurie and less than or equal to ten millicuries of any single isotope.

(c) One thousand five hundred twenty dollars for a license authorizing possession at a single facility of unsealed sources in amounts:

(i) Greater than 0.01 millicurie and less than or equal to 0.1 millicurie of I-125 or I-131; or

(ii) Greater than one millicurie and less than or equal to ten millicuries of H-3 or C-14; or

(iii) Greater than 0.1 millicurie and less than or equal to one millicurie of any other single isotope.

(d) Five hundred twenty-five dollars for a license authorizing possession at a single facility of unsealed or sealed sources in amounts:

(i) Less than or equal to 0.01 millicurie of I-125 or I-131; or

(ii) Less than or equal to one millicurie of H-3 or C-14; or

(iii) Less than or equal to 0.1 millicurie of any other single isotope.

(e) Seven hundred five dollars for a license authorizing possession at a single facility of large quantities of naturally occurring radioactive material in total concentration not exceeding 0.002 microcurie per gram.

(2) Persons with licenses authorizing multiple locations of use shall increase the annual fee by fifty percent for each additional location.

(3) Persons registered to perform in vitro testing pursuant to Form RHF-15 shall forward an annual fee of seventy dollars to the department.

[Statutory Authority: RCW 43.70.250, 43.270.040, and 2001 2nd sp.s. c 7 § 220. 02-04-025, § 246-254-100, filed 1/24/02, effective 2/24/02. Statutory Authority: RCW 70.98.080. 01-14-046, § 246-254-100, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 43.70.250. 00-02-016, § 246-254-100, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-254-100, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.70.110. 98-11-067, § 246-254-100, filed 5/19/98, effective 6/19/98. Statutory Authority: RCW 43.70.110, [43.70.]250 and chapter 70.98 RCW. 96-11-043, § 246-254-100, filed 5/8/96, effective 6/28/96; 95-12-004, § 246-254-100, filed 5/25/95, effective 6/25/95; 94-11-011 § 246-254-100, filed 5/5/94, effective 6/5/94; 93-13-019 (Order 372), § 246-254-100, filed 6/8/93, effective 7/9/93. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-100, filed 10/29/91, effective 11/29/91.]

WAC 246-254-110 Fees for reciprocity. (1) The department shall charge fees for reciprocal recognition of other agreement state, licensing state or United States

[Title 246 WAC—p. 451]

Nuclear Regulatory Commission licenses based upon the actual amount of radioactive material or type of devices being transported into Washington state or the type of service to be performed involving radioactive material.

(2) The department shall charge a fee equal to one hundred percent of the fee specified under WAC 246-254-070, 246-254-080, 246-254-090, and 246-254-100.

(3) The department shall permit the reciprocally recognized licensee to possess and use radioactive material in the state of Washington up to one hundred eighty days during the twelve-month period following payment of each fee.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-110, filed 10/29/91, effective 11/29/91.]

WAC 246-254-120 Fees for licensing and compliance actions. (1) In addition to the fee for each radioactive material license as described under WAC 246-254-070, 246-254-080, 246-254-090, and 246-254-100, a licensee shall pay a service fee for each additional licensing and compliance action as follows:

(a) For a second follow-up inspection, and each follow-up inspection thereafter, a fee of one hundred dollars per hour of direct staff time associated with the follow-up inspection, not to exceed one thousand dollars per follow-up inspection. Hours are calculated in half-hour increments.

(b) For each environmental cleanup monitoring visit, a fee of one hundred dollars per hour of direct staff time associated with the environmental cleanup monitoring visit, not to exceed two thousand five hundred dollars per visit. Hours are calculated in half-hour increments.

(c) For each new license application, the fee of one hundred sixty dollars in addition to the required annual fee.

(d) For each sealed source and device evaluation, a fee of one hundred dollars per hour of direct staff time associated with each sealed source and device evaluation, not to exceed three thousand dollars per evaluation.

(e) For review of air emission and environmental programs and data collection and analysis of samples, and review of decommissioning activities by qualified staff in those work units, a fee of one hundred dollars per hour of direct staff time associated with the review. The fee does not apply to reviews conducted by the radioactive materials section staff and does not apply unless the review time would result in a special service charge exceeding ten percent of the licensee's annual fee.

(f) For expedited licensing review, a fee of one hundred dollars per hour of direct staff time associated with the review. This fee only applies when, by the mutual consent of licensee and affected staff, a licensing request is taken out of date order and processed by staff during nonwork hours and for which staff is paid overtime.

(2) The licensee or applicant shall pay any additional service fees at the time of application for a new license or within thirty days of the date of the billing for all other licensing and compliance actions.

(3) The department shall process an application only upon receipt of the new application fee and the annual fee.

(4) The department may take action to modify, suspend, or terminate the license or sealed source and device registra-

tion if the licensee fails to pay the fee for additional licensing and compliance actions billed by the department.

[Statutory Authority: RCW 43.70.250, 43.270.040, and 2001 2nd sp.s. c 7 § 220. 02-04-025, § 246-254-120, filed 1/24/02, effective 2/24/02. Statutory Authority: RCW 70.98.080. 01-14-046, § 246-254-120, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 43.70.110, 43.70.250 and chapter 70.98 RCW. 95-12-004, § 246-254-120, filed 5/25/95, effective 6/25/95; 94-11-011, § 246-254-120, filed 5/5/94, effective 6/5/94; 93-13-019 (Order 372), § 246-254-120, filed 6/8/93, effective 7/9/93. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-120, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-70-070, filed 12/11/86; 79-12-073 (Order 1459), § 402-70-070, filed 11/30/79, effective 1/1/80.]

WAC 246-254-130 Radioactive waste disposal site surveillance fee. (1) The department shall charge a fee for radioactive waste site surveillance.

(2) The fee shall be an added charge on each cubic foot of low-level waste disposed at the disposal site.

(3) The department shall authorize by contract the operator of a low-level radioactive waste disposal site to collect the fee from waste generators and brokers.

(4) The department shall provide for reimbursement to the site operator for collection costs.

(5) The department shall calculate the fee collected from waste generators and brokers as required under RCW 70.98.085 and the fee shall not exceed the statutory limit specified in that section.

(6) The site operator shall remit the fee to the department as follows:

(a) Quarterly for the first seven quarters of each biennium.

(b) By July 15 for the final quarter of the biennium.

[Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.085. 90-11-126 (Order 050), § 402-70-073, filed 5/23/90, effective 6/23/90.]

WAC 246-254-140 Fees for uranium, thorium and other mineral processors. (1) Persons licensed or authorized to receive, possess, or use natural uranium and its decay daughters for the extraction of uranium or thorium compounds or for the reclamation and disposal of the associated tailings or waste shall pay:

(a) Initial application fee of thirty-five thousand dollars; and

(b) Quarterly billings for actual costs to the department.

(2) The department shall bill the uranium or thorium milling licensee quarterly for the department's actual cost of:

(a) Reviewing and issuing a license in excess of the initial application fee;

(b) Determining the licensee's compliance with terms and conditions of the license;

(c) Reviewing license amendment requests;

(d) Maintaining a uranium mill program which is compatible with the requirements of the United States Nuclear Regulatory Commission;

(e) Determining and assuring compliance with chapter 173-11 WAC; and

(f) Reviewing and processing an application for renewal.

(3) The department shall delineate in the quarterly billing the staff, laboratory, and support service costs.

(4) The department:

(a) Shall process any initial application only upon receipt of the full fee specified; and

(b) May return an application to an applicant if no payment is received.

(5) The department shall credit the initial application fee to the applicants' quarterly billing.

(6) Mineral processors requiring licenses for naturally occurring radioactive material in excess of exempt concentrations shall pay:

(a) Initial application fee of twenty-seven thousand dollars; and

(b) Quarterly billings not to exceed forty thousand dollars.

(7) The department shall bill mineral processor licensees quarterly for the department's actual cost of:

(a) Processing and issuing a license in excess of the initial application fee;

(b) Determining the licensee's compliance with terms and conditions of the license;

(c) Reviewing and processing amendment and renewal requests; and

(d) Determining and assuring compliance with chapter 173-11 WAC.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-140, filed 10/29/91, effective 11/29/91.]

WAC 246-254-150 Fees for perpetual care and maintenance. (1) Persons with licenses specifically authorizing the receipt, possession, or use of natural uranium and its decay daughters for the extraction of uranium or thorium compounds or for the reclamation and disposal of the associated tailings or waste shall:

(a) Make quarterly payments of twenty cents per kilogram of uranium or thorium compound milled out of the raw ore;

(b) Remit this payment within thirty days after the end of each calendar quarter; and

(c) Pay to the department a minimum of two hundred fifty thousand dollars (1978 dollars) to cover the costs of long-term surveillance prior to the termination of a uranium or thorium mill license.

(2) Licensees under this section may make additional payments to meet the minimum, prior to the release of any surety arranged by the licensee in accordance with WAC 246-235-086(4).

[Statutory Authority: RCW 70.98.050. 00-08-013, § 246-254-150, filed 3/24/00, effective 4/24/00. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-150, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-70-080, filed 12/11/86.]

WAC 246-254-160 Fees for airborne emissions of radioactive materials. (1) The department shall waive the fee of one thousand dollars for each air emission permit application for those facilities who pay the fees specified in WAC 246-254-070, 246-254-080, 246-254-090, and 246-

254-100; however, those facilities shall pay costs associated with direct staff time of the air emissions program in accordance with WAC 246-254-120 (1)(e).

(2) For emission units at all other facilities:

(a) Application. The applicant shall submit a fee of one thousand dollars for each air emission license to the department with each application.

(i) The department shall process only those applications accompanied by the fee prescribed in (a) of this subsection. The department shall return any application submitted without the prescribed fee to the applicant.

(ii) The applicant shall pay any additional actual costs involved with processing the application upon receipt of a bill from the department on a calendar quarter basis.

(iii) The department shall credit the initial application fee to the applicant's quarterly billings.

(b) Operations. The department shall charge each emission unit operator the actual expenses incurred by the department in determining compliance with the provisions of established regulations and conditions of the air emission license; and:

(i) Bill the operator each calendar quarter until the air emission license is terminated by the department.

(ii) Specify in the quarterly bill the staff, laboratory, and support service costs associated with the regulatory activities conducted by the department.

(c) Amendment. The department shall add and include the actual costs incurred by the department in reviewing and processing an amendment to an air emission license in the department's calendar quarter charge for regulatory activities.

[Statutory Authority: Chapters 70.98 and 70.94 RCW and chapter 173-480 WAC. 94-07-010, § 246-254-160, filed 3/4/94, effective 4/4/94. Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-160, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-160, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.98 RCW. 88-17-061 (Order 2670), § 440-44-062, filed 8/17/88.]

WAC 246-254-170 Failure by applicant or licensee to pay prescribed fees. In any case where the department finds that an applicant, a permittee, a registrant, or a licensee failed to pay a prescribed fee or actual costs incurred during a calendar quarter, the department: (1) Shall not process any application and (2) may suspend or revoke any license, permit, registration, or approval involved; or (3) may issue an order with respect to licensed, permitted, or registered activities as the department determines appropriate or necessary in order to carry out the provisions of this chapter.

[Statutory Authority: RCW 43.70.110. 91-22-027 (Order 208), § 246-254-170, filed 10/29/91, effective 11/29/91. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-254-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. 87-01-031 (Order 2450), § 402-70-090, filed 12/11/86; 79-12-073 (Order 1459), § 402-70-090, filed 11/30/79, effective 1/1/80.]

Chapter 246-260 WAC

WATER RECREATION FACILITIES

WAC

246-260-001	Purpose and authority.
246-260-010	Definitions.
246-260-020	General administration.
246-260-030	Construction permit.

246-260-040	Operating permit.
246-260-050	Compliance.
246-260-060	Surveillance.
246-260-070	Water quality standards, analysis, and sample collection.
246-260-080	Monitoring, reporting, and recordkeeping.
246-260-090	Swimming pool design, construction, and equipment.
246-260-100	Operation of swimming pool facilities.
246-260-110	Spa pool design, construction, and equipment.
246-260-120	Operation of spa pool facilities.
246-260-130	Wading pool design, construction, and equipment.
246-260-140	Operation of wading pool facilities.
246-260-150	Spray pool design, construction, and equipment.
246-260-160	Operation of spray pool facilities.
246-260-170	Water recreation facility pools not in operation.
246-260-180	Bathing beaches.
246-260-200	Water recreation industry requirements.
246-260-210	Technical advisory committee.
246-260-220	Restrictions on animals.
246-260-230	Variance.
246-260-240	Substitution.
246-260-250	Enforcement.
246-260-260	Hearings.
246-260-9901	Fees.
246-260-998	Severability.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-260-990	Fees. [Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-260-990, filed 12/27/90, effective 1/31/91.] Repealed by 94-11-056, filed 5/11/94, effective 6/11/94. Statutory Authority: RCW 70.90.150 and 43.20B.020.
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WAC 246-260-001 Purpose and authority. The purpose of this chapter is to protect the health, safety, and welfare of users of water recreation facilities (WRF). This chapter is established per RCW 70.90.120.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-260-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 90-07-010 (Order 042), § 248-98-003, filed 3/12/90, effective 4/12/90.]

WAC 246-260-010 Definitions. (1) "Abbreviations" (technical):

- (a) "DE" means diatomaceous earth;
 - (b) "fps" means feet per second;
 - (c) "gpm" means gallons per minute;
 - (d) "mg/l" means milligrams per liter. When requirements in this regulation specify limits for liquid volume measurements using mg/l or ppm, either may be used depending on the type of testing equipment available;
 - (e) "ppm" means parts per million. See notation under mg/l for use;
 - (f) "TU" means turbidity unit as measured by the nephelometric method.
- (2) "ANSI" means American National Standards Institute.
- (3) "APHA" means American Public Health Association.
- (4) "Approved" means the department or local health officer has stated in writing that the design plans and specifications are in accordance with chapter 246-260 WAC.
- (5) "ARC" means American Red Cross.
- (6) "Architect" means a registered architect currently licensed under chapter 18.08 RCW in Washington state.
- (7) "ASHRAE" means American Society of Heating, Refrigeration and Air Conditioning Engineers.

(8) "Assistant lifeguard" means a person appointed by the owner or manager meeting the training requirements of this chapter actively assisting lifeguards (under direct lifeguard supervision) for the purpose of ensuring bather safety.

(9) "Attendant" means a person appointed by the owner or manager meeting the training requirements of this chapter, monitoring activities and conditions for the purpose of ensuring bather safety.

(10) "Bathing beach" means a bathing place, together with buildings and appurtenances used in connection therewith, on a natural pond, lake, stream, or other body of fresh or salt water, which is open to the public for bathing by express permission of the owner, or which is operated for a fee, or openly advertised as a place for bathing by the public.

(11) "Board" means the state board of health.

(12) "CNCA" means Council for National Cooperation in Aquatics.

(13) "CPSC" means Consumer Product Safety Commission (U.S.).

(14) "Communication system" means any combination of devices permitting the passage of or exchange of messages between personnel and/or personnel and bathers. Systems can include but are not limited to two-way radios, hard wired intercoms, horns, whistles, hand signals, direct voice, signs, or equivalent.

(15) "Contaminant" means any physical, chemical, or biological substance present in the WRF water which may adversely affect the health or safety of the bather and/or the quality of the water.

(16) "Cross-connection" means any physical arrangement connecting a:

(a) Potable water system directly or indirectly, with anything other than another potable water system; or

(b) WRF pool to any potable or nonpotable water source capable of contaminating either the WRF pool, its components, or potable water source as a result of backflow.

(17) "Department" means the department of health.

(18) "Diving envelope" means the minimum dimensions of an area within the pool necessary to provide entry from a diving board, platform, or pool decking intended for users to dive.

(19) "Engineer" means a registered professional engineer currently licensed under chapter 18.43 RCW in Washington state.

(20) "FINA" means Federation Internationale de Natation Amateur.

(21) "General use pool" means any swimming, spa, wading, or spray pool regulated by this chapter not meeting the definition of a "limited use pool." If limited-use pools provide organized programs (as noted in limited use definition), the limited use pools shall conform with the general-use pool requirements during periods of such activity.

(22) "Handhold" means a structure not over twelve inches above the water line around the perimeter of the pool wall, affording physical means for the bather to grasp the pool sides.

(23) "Illness or injury report" means the written record of all facts regarding an injury or illness associated with the WRF.

- (24) "Lifeguard" means a person appointed by the owner or manager to maintain surveillance over the bathers on the deck or in the pool and to supervise bather safety. The lifeguard shall meet the training requirements of this chapter.
- (25) "Lifeguard station" means designated work station of a lifeguard.
- (26) "Lifesaving equipment" means emergency equipment and barrier protection.
- (27) "Limited use pool" means any swimming, spa, wading, or spray pool regulated by this chapter at an apartment, boarding home, condominium, home owners association, hotel, mobile home park, motel, recreational vehicle park, or rental housing unit and is for the use of the persons living or residing at these facilities and the resident's invited guests. If such pool provides organized programs at the facility (that is, formal instructional lessons for swimming or diving, swim meets, exercise classes, or other activities planned for users besides those specified under the limited use pool category), the pool facility shall conform with the general use pool requirements during periods of such activity.
- (28) "Local health officer" means the health officer of the city, county, or city-county department or district or a representative authorized by the local health officer.
- (29) "NSF" means National Sanitation Foundation.
- (30) "NSPI" means National Spa and Pool Institute.
- (31) "Operations" means all aspects of a WRF which must be controlled to make the facility safe, healthy, and usable for the purpose intended.
- (32) "Owner" means a person owning and responsible for a WRF or authorized agent.
- (33) "Person" means an individual, firm, partnership, copartnership, corporation, company, association, club, government entity, or organization of any kind.
- (34) "Pool" means swimming pool, wading pool, spray pool, or spa pool or the like.
- (35) "Plummet" means a line perpendicular to water surface and extending vertically to a point located at the front end of the diving board and at the center line directly in front of the diving board.
- (36) "Primary zone of visual coverage" means the area assigned to a lifeguard or attendant for primary visual surveillance of user activity.
- (37) "Radius of curvature" means the radius arc denoting the curved surface from the point of departure from the springline (vertical sidewall) of the pool to the pool bottom.
- (38) "Response time" means time between bather distress and initiation of rescue assistance contact by a lifeguard in facilities providing lifeguards.
- (39) "Recreational water contact facility" means an artificial water associated facility with design and operational features that provide patron recreational activity which is different from that associated with a conventional swimming pool and purposefully involves immersion of the body partially or totally in the water, and that includes but is not limited to water slides, wave pools, and water lagoons. These facilities are regulated by chapter 246-262 WAC.
- (40) "RLSSC" means the Royal Life Saving Society of Canada.
- (41) "Secretary" means the secretary of the department of health.

(2003 Ed.)

- (42) "Serious injury" means any injury:

(a) Requiring emergency service response where a person requires medical treatment as determined by the emergency medical response personnel; and/or

(b) Resulting in a person seeking medical attention at a hospital emergency room or admittance to a hospital.

(43) "Spa pool" means a pool designed for relaxation or recreational use where the user is sitting, reclining, or at rest and the pool is not drained, cleaned, or refilled for each user. The spa pool may include, but not be limited to, hydrojet circulation, hot water, cold water, mineral baths, air induction bubbles in any combination.

(44) "Spray pool" means a pool or artificially constructed depression for use by bathers in which water is sprayed, but is not allowed to pond, in the bottom of the pool.

(45) "Springline" means the point where the pool wall breaks from vertical and begins its arc in the radius of curvature (for cove construction) to the bottom of the pool.

(46) "Swimming pool" means any structure, basin, chamber, or tank containing an artificial body of water for swimming, diving, relaxation, or recreational bathing and having a depth of two feet or more at any point and including all associated facilities.

(47) "Turnover time" means the minimum time necessary to circulate the entire volume of the pool facility through the treatment system.

(48) "Wading pool" means any artificial pool of water equal to or less than two feet deep and intended for wading purposes.

(49) "Walking surface" means any surface used as a direct access surface for a pool area and the walking surface's change room facilities where the user is barefoot.

(50) "Water treatment operator" means the appointed person operating the physical and mechanical equipment and performing related water quality monitoring and associated record keeping for proper operation of the physical facility.

(51) "Water recreation facility (WRF)" means any artificial basin or other structure containing water used or intended to be used for recreation, bathing, relaxation or swimming, where body contact with the water occurs or is intended to occur and includes auxiliary buildings and appurtenances. The term includes, but is not limited to:

(a) Conventional swimming pools, wading pools, and spray pools;

(b) Recreational water contact facilities as defined under RCW 70.90.110 and regulated under chapter 246-262 WAC;

(c) Spa pools and tubs using hot water, cold water, mineral water, air induction, or hydrojets; and

(d) Any area designated for swimming in natural waters with artificial boundaries within the waters.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-001, filed 3/12/90, effective 4/12/90; Regulation .98.001, effective 3/11/60.]

WAC 246-260-020 General administration. (1) The department and local health officer for each local health jurisdiction shall develop an interagency agreement listing the

responsibilities of each agency for administering these rules. The agreement shall designate the person responsible for:

- (a) Issuance of construction permits with plan review and review of completed facilities;
 - (b) Issuance of operation permits and routine surveillance of facilities; and
 - (c) Enforcement actions.
- (2) Fees may be charged as authorized in RCW 70.90.150.
- (3) The interagency agreement shall be reviewed periodically to ensure effective use of local and state resources.
- (4) The department shall conduct a local health jurisdiction program review a minimum of once every five years to ensure conformance with state board of health standards.
- (5) The department shall review this chapter for changes at least once every five years.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-260-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 90-07-010 (Order 042), § 248-98-005, filed 3/12/90, effective 4/12/90.]

WAC 246-260-030 Construction permit. (1) Persons planning to construct, alter, or modify a WRF pool, except for routine maintenance, shall submit plans to the department or local health officer as required for review and approval:

- (a) A completed construction permit application form obtained from the department or local health officer;
 - (b) Three sets of plans and specifications prepared and signed by an engineer or architect.
- (2) The architect or engineer shall provide the following information for plan review approval and project completion:
- (a) Plans drawn to scale and in sufficient detail to completely illustrate construction including, but not limited to:
 - (i) One plan view;
 - (ii) One or more cross sections through the main drain;
 - (iii) Overall plan showing the pool in relation to other facilities in the area;
 - (iv) Detailed view of the equipment layout and the associated room or location;
 - (v) A piping schematic showing piping configuration, pipe size, valves, inlets, main drains, overflow outlets, make-up water, and backwash from filter;
 - (vi) Dimensional drawings of pool bottom and sidewalls;
 - (vii) Specifications of all required components;
 - (viii) Such other department-required information.
 - (b) Engineers or architects may submit standard plans for prefabricated structures or structures virtually identical from one installation to the next. When the engineer or architect submits such standard drawings, future submittals, involving the standard equipment shall:
 - (i) Include copies of the approved standard drawings;
 - (ii) Include an engineer or architect cover letter noting the location and address of the new facility;
 - (iii) Be substantially in conformance with the original standard plan;
 - (iv) Provide information on changes and note any specification differences; and
 - (v) Be valid only during the period regulations or department policies concerning plan review and design standards

are not changed. If errors are determined at a later period, it will be necessary to resubmit.

(c) The facility construction report noted under subsection (5)(a) of this section. On pools:

(i) Less than fifteen hundred square feet, the construction report shall confirm the:

(A) Mechanical equipment and circulation system is installed and functioning substantially in accordance with the approved plans; and

(B) Facility with provisions for diving substantially conforms with the diving envelope requirements established in the regulation.

(ii) Fifteen hundred square feet or more, shall confirm:

(A) Subitems under subsection (2)(c)(i) of this section; and

(B) Walking surfaces, barriers, pool components including piping, inlets, outlets, dimensional design, pool appurtenances, equipment rooms, ventilation, and lighting and plumbing fixtures are substantially in conformance with the approved plans.

(3) Following review of the completed permit application and plans and specifications, the department or local health officer shall forward:

(a) Written approval or rejection or note modifications, additional information needed or conditions, and issue or deny a construction permit within thirty days of a complete submittal;

(b) A copy of approved plans to the designer; and

(c) A copy of the approval letter to the department or local health officer and local building department.

(4) The owner shall ensure any construction, modification, or alteration is completed according to approved plans and specifications.

(5) Upon completion of WRF pool facility construction, modification, or alteration and before use, owners shall:

(a) Submit to the department or local health officer a construction report signed by an engineer or architect certifying construction is substantially in compliance with approved plans and specifications and related to conditions under subsection (2)(c) of this section;

(b) Notify the department or local health officer at least five working days before intended use of the facility; and

(c) Before use of a new or modified pool facility, obtain a valid operating permit from the state or local health jurisdiction having authority for surveillance of the pool.

(6) The construction permit issued by the department or local health officer shall be valid for a period of eighteen months. Renewals of construction permits may be granted by the department or local health officer for a period of one year. The owner is responsible to resubmit for a reapplication for a construction permit.

(7) WRF pool owners shall comply and obtain approval with all other applicable agency codes and standards. The agency codes and standards include, but are not limited to:

(a) The National Electrical Code, chapter 19.28 RCW and chapter 296-46 WAC determined under the electrical section of the Washington state department of labor and industries or local electrical authority;

(b) Local gas piping and appliance codes, American Gas Association standards, and certification meeting the latest ANSI Z21.56 or other applicable and equivalent standards;

(c) Local building authority standards, including structural design of components;

(d) State and local plumbing authority standards;

(e) Washington state department of labor and industries requirements for pressure vessels under chapter 70.79 RCW and chapter 296-104 WAC; and

(f) Codes designated under chapter 70.92 RCW for handicapped accessibility.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-010, filed 3/12/90, effective 4/12/90; Regulation .98.010, effective 3/11/60.]

WAC 246-260-040 Operating permit. (1) No person shall operate a water recreation pool facility without a current department or local health officer-issued operating permit.

(2) To obtain an operating permit, owners of a water recreation pool facility shall provide department or local health officer information showing the WRF is in compliance with this chapter.

(3) Operating permits shall be:

(a) Valid for one year;

(b) Subject to annual renewal; and

(c) Nontransferable without written department or local health officer consent. For purposes of this section, a change in management of a corporation, partnership, association, or other nonindividual business entity shall create a new person requiring either consent to a permit transfer or issuance of a new permit upon proper application.

(4) The department or local health officer issuing the operating permit may revoke or suspend the permit if the WRF is not operated in accordance with chapter 70.90 RCW or chapter 246-260 WAC.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-015, filed 3/12/90, effective 4/12/90.]

WAC 246-260-050 Compliance. (1) Existing water recreation facilities which do not fully comply with the design, construction, and equipment requirements in WAC 246-260-090, 246-260-110, 246-260-130, and 246-260-150 may be continued in use except as noted in subsections (2) and (3) of this section.

(2) Existing water recreation facilities shall be operated in continuous compliance with the provisions of this chapter as outlined in the life saving equipment requirements as defined in WAC 246-260-010(26), 246-260-070, 246-260-080, 246-260-100, 246-260-120, 246-260-140, 246-260-160, and 246-260-170, and provisions for lifesaving equipment in this chapter.

(3) Existing water recreation facilities built before the effective date of this chapter revision:

(a) Having barriers not conforming with this chapter, may maintain the barrier as it presently exists provided:

(i) Barrier is forty-eight inches or more in height;

(ii) Barrier has a maximum width opening of vertical members not exceeding six inches in width;

(iii) Each entry to the pool area has a self-closing, self-latching gate or door.

(b) Having barriers not conforming with this chapter, must upgrade the barrier to conform with this chapter if the existing barrier height is less than forty-eight inches in height.

(4) Facilities exempted from the regulations are noted under RCW 70.90.250 and the term medical therapy include facilities whose sole use is therapy provided for medical:

(a) Treatment under the supervision of licensed medical practitioners; or

(b) Rehabilitation for institutionalized patients under supervision of licensed medical practitioners.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-050, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-020, filed 3/12/90, effective 4/12/90; Regulation .98.020, effective 3/11/60.]

WAC 246-260-060 Surveillance. (1) Owners and operators shall permit the department or local health officer to perform on-site WRF inspections or other surveillance activity as necessary in the discretion of the enforcing agency to ensure compliance with standards under chapter 70.90 RCW and chapter 246-260 WAC.

(2) Employees of the enforcing agency shall provide appropriate identification when entering a WRF for the purpose of routine inspections.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-060, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-025, filed 3/12/90, effective 4/12/90.]

WAC 246-260-070 Water quality standards, analysis, and sample collection. (1) **Contaminants.** Owners shall maintain waters free from harmful levels of disease-producing organisms, toxic chemicals, or adverse physical conditions.

(2) **Bacteriological standards.** Owners shall maintain WRF pool waters to meet the following standards of bacteriological quality:

(a) Heterotrophic plate counts not to exceed two hundred bacteria per milliliter in two consecutive tests;

(b) Total coliform not to exceed an average of one coliform per sample of one hundred milliliters in two consecutive tests when using the membrane filter test; and

(c) Total coliform not to exceed one tube positive in two consecutive tests when using the MPN method.

(3) **Disinfection.** Owners shall maintain continuous and effective methods of disinfection of WRF pool waters at all times with use of:

(a) Chlorine or bromine described under Table 070.1 of this section; and/or

(b) Alternate forms of disinfection meeting the following criteria:

(i) Registered with the Environmental Protection Agency, if required;

- (ii) Registered with the Washington state department of agriculture, if required;
- (iii) Conformance with NSF standard 50 or equal when applicable; and
- (iv) Adherence to department-established guidelines.

(c) Alternate forms of disinfection for which the department has developed board-approved standards or guidelines including:

- (i) "Interim guidelines governing the use of ozone and ozonators for water recreation facilities;"
- (ii) "Interim guidelines governing the use of copper/silver disinfection processes for water recreation facilities."

(4) **Chemical and physical quality.** Owners shall maintain:

(a) Physical and chemical conditions within the ranges specified under Table 070.2 of this section;

(b) Cleanliness by:

(i) Closing an affected WRF area or affected portion of a WRF area when contaminated with feces, vomit, sewage, or other hazardous or unknown material until the area is clean, disinfected, and free of the hazardous material;

(ii) Daily removal of scum or floating material on the pool water surface;

(iii) Continuous removal of scum or floating material by overflow action of pool water with flotsam screened and filtered; and

(iv) Maintaining sanitary walking surfaces.

(c) WRF spa pools which are routinely drained, cleaned, and refilled at a minimum using the formula as follows:

$$\text{Spa volume} \div 3 \div \text{average number of users/day} = \text{Number of days, between draining, cleaning, and refilling.}$$

(5) **Laboratory sampling and testing.** Persons collecting laboratory analysis water samples shall:

(a) Collect and transport chemical and micro-organism samples based on the most recent published edition of standard methods for the examination of water and waste/water analysis, published jointly by the American Public Health Association/Water Pollution Control Federation and American Waterworks Association, referred to as "standard methods" in this chapter;

(b) Have laboratory tests performed per "standard methods" at department-approved laboratories to provide such analyses;

(c) Provide adequate data for completing analyses; and

(d) Use department-approved water sample bottles for collection of samples.

(6) **Field testing.** Owners shall have field testing equipment:

(a) To provide means for measuring disinfectant residuals, pH, alkalinity, and any other chemicals routinely used in the pool water;

(b) In pools where compressed chlorine gas is used, to detect leaks using commercial strength (twenty-six degrees Baume) ammonia vapor; and

(c) With a suitable range of readings for the routinely measured parameters as noted under Table 070.3 of this section.

(7) **Chemicals in pool.** Owners shall ensure addition of chemicals or materials to WRF pool waters only when the use is approved or recognized as acceptable by the department. The department has available to WRF pool owners the current approved or acceptable material lists.

(8) **Additional tests.** Owners shall perform additional department or local health officer-directed tests.

TABLE 070.1
MINIMUM AND
MAXIMUM LEVELS OF DISINFECTANTS*

Currently Recognized Disinfectants	Type of Residual Measured	pH Ranges 7.2-7.49	7.5-7.79 Residual	7.8-8.0 Levels	Maximum Residual ppm**
1. Chlorine	Free available chlorine	1.0	1.4	1.8	6
2. Chlorinated cyanurate	Free available chlorine	1.5	2.0	2.8	6
3. Bromine	Total available bromine	2.0	2.5	3.5	6

Note:

* When using spa facilities, increase minimum residuals in all categories by 1.5 ppm.

** Maximum residual as noted or manufacturer's recommendations (whichever is less). In spa facilities, maximum residual may be raised to 10 ppm or manufacturer's recommendations (whichever is less).

TABLE 070.2
ACCEPTABLE RANGES OF SELECTED CHEMICAL AND
PHYSICAL WATER QUALITY CONSTITUENTS

Chemical or Physical Constituent	Minimum	Maximum
1. pH (Hydrogen ion)	7.2	8.0
2. Water clarity (safety)	Main drain and pool bottom visible at all times	—
3. Turbidity (shielding micro-organisms from disinfection)	—	0.5 TU*
4. Cyanuric acid or its derivatives (if used)	0	90 ppm
5. Temperature	—	104 F.**
6. Combined chlorine	—	<50% of free chlorine
7. ORP***	700 mv.	

Note:

* In peak periods, turbidity may increase to 1.0 TU provided turbidity returns to 0.5 TU within a six-hour period following peak use. Turbidity is not a required routine analysis. Turbidity monitoring may be required by the department or local health officer if special conditions warrant turbidity monitoring

** A pool facility thermometer shall be provided when the water temperature exceeds 95 degrees Fahrenheit.

*** Oxidation-reduction potential (ORP) readings used in conjunction with chlorine and bromine may be allowed as long as values are maintained no less than 700 millivolts. ORP readings do not preclude the need for field testing of the actual mg/l residual for the specific disinfectant on at least a daily basis.

TABLE 070.3

RANGE OF ACCEPTABLE TESTING LEVELS FOR FIELD TEST KITS*

Chemical Test	Minimum Range	Minimum Accuracy
1. Free available chlorine	0.3 to 3.0 ppm	0.2 ppm to 1.0 ppm 0.5 ppm above 1.0 ppm
2. Total chlorine	0.3 to 3.0 ppm	0.2 ppm to 1.0 ppm 0.5 ppm above 1.0 ppm
3. Total bromine	0.3 to 4.0 ppm	0.2 ppm to 1.0 ppm 0.5 ppm above 1.0 ppm
4. pH (hydrogen ion)	7.0 to 8.2	0.2
5. Cyanuric Acid	0 to 100 ppm	10 ppm
6. Alkalinity	0 to 300 ppm	15 ppm
7. Temperature (spas)	60 to 110 degrees F.	1 degree F.

Note:

- * Do not make a chemical condition determination based on readings at the extreme measurable limits of the scale.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-070, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-030, filed 3/12/90, effective 4/12/90; Regulation .98.030, effective 3/11/60.]

WAC 246-260-080 Monitoring, reporting, and recordkeeping. (1) Reporting death, injury, and illness. Owners shall:

(a) Provide department or local health officer-requested information for statewide injury and illness surveillance reports; and

(b) Within forty-eight hours, notify the department or local health officer of a drowning, near drowning, death, or serious injury or illness occurring at the water recreation facility.

(2) Incidents. Owners shall provide department or local health officer-requested information after an incident creating a potential problem of health or safety significance, for example, chlorine gas leak.

(3) Monitoring and recordkeeping. Owners shall monitor and maintain records for at least three years on the following:

(a) Water quality conditions on WRF pools including:

(i) Residual disinfectant testing often enough to determine the residual is satisfactory, and in no condition shall residual disinfectant testing be done less than once every twenty-four hours;

(ii) Hydrogen ion (pH) concentration testing often enough to determine the concentration is satisfactory, and in no condition shall testing be done less than once every twenty-four hours;

(iii) Checking alkalinity monitored at least weekly;

(iv) Recording quantities of all chemicals added to pool water, including alum, algicides, cyanuric acid, acids, alkalinity compounds, etc.

(v) Checking gauges sufficiently to assure conformance with code requirements for turnover during the filter cycle;

(vi) Any gross water contamination, for example, vomiting, feces, etc.;

(vii) When pool temperature is over ninety-five degrees, temperature testing sufficiently often to determine temperature is in a satisfactory range at or below one hundred and

(2003 Ed.)

four degrees Fahrenheit and in no condition shall temperature testing be done less than once every twenty-four hours; and

(viii) When cyanuric acid or its derivatives are used in a pool, cyanurate level testing to determine the cyanurate level is maintained below the maximum level of ninety mg/l, and in no condition shall cyanurate level testing be done less than once every week the pool is in use.

(b) Routine preventive maintenance provided on all hazardous equipment, for example, gas chlorination equipment;

(c) Daily estimation of number of users;

(d) Personnel credentials, training, and/or certifications required under WAC 246-260-100(5), 246-260-120(5), and 246-260-140(5).

(4) Availability. Owners shall make records required by this section available for department or local health officer review upon request.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-080, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-035, filed 3/12/90, effective 4/12/90.]

WAC 246-260-090 Swimming pool design, construction, and equipment. (1) Location. Owners shall locate pools to:

(a) Minimize pollution by dust, smoke, soot, and other undesirable substances;

(b) Eliminate pollution from surrounding surface drainage; and

(c) Ensure pump house, trees, and other structures are located fifteen feet or more from the pool or provide barriers or other means to prevent ready access from the structure. Structures shall not be construed to include:

(i) Building walkways above the second story or roofs of any building structure; or

(ii) Any barriers provided to prevent unauthorized pool access, for example fencing.

(2) **Materials.** Owners shall use only structure and equipment materials which are nontoxic, durable, inert, impervious to water, and easily cleanable.

(3) **Walking surfaces.** Owners shall design and maintain walking surfaces:

(a) Uniformly sloping away from the pool or pools a minimum of one-fourth inch per foot and a maximum of one-half inch per foot;

(b) Of a nonslip finish not presenting a tripping hazard;

(c) Equipped with sufficient drains to prevent standing water;

(d) Of easily cleanable, impervious finishes;

(e) At least six feet wide on the shallow end of pool, except for:

(i) Pools with all depths uniform at ends, at least one end six feet wide or more; or

(ii) Circular or irregular pools at least twenty-five percent of the deck six feet wide or more.

(f) Four feet or more in width on pools with an area fifteen hundred square feet or less;

(g) Six feet or more in width;

(i) On outdoor pools fifteen hundred square feet or more;

[Title 246 WAC—p. 459]

(ii) On fifty percent of the perimeter of indoor pools fifteen hundred square feet or more. Perimeter on remainder of the deck shall be four feet or more in width.

(h) A minimum of sixteen square feet per bather on pools fifteen hundred square feet or more. Determine maximum bather load as described under subsection (12) of this section. If owner provides maximum facility occupancy loading less than that of subsection (12) of this section, and such occupancy limit is posted and enforced, that loading may be used in lieu of the maximum bather load figure as described under subsection (12) of this section;

(i) In swimming pools designed for competitive use with likelihood of spectators, a minimum of six feet between spectator viewing area and the pool. Balconies shall be fifteen feet or more from the pool unless properly safeguarded from intruding into the pool area;

(j) In conformance with department-established guidelines for any resilient artificial surfaces; and

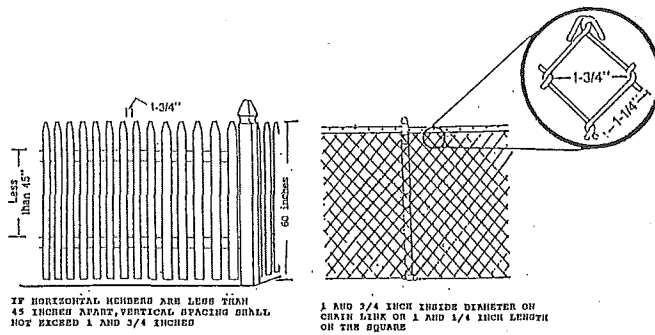
(k) General use pools shall not have sand and grass areas within the pool enclosure unless separated to prevent direct access from the pool area and means are provided for cleansing the bather's feet before re-entering the pool and deck area.

(4) **Barriers.** Owners shall provide barrier protection to prevent unauthorized access.

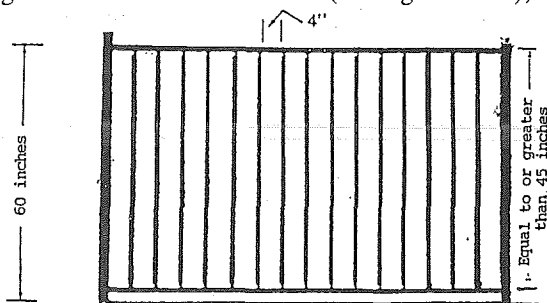
(a) A barrier shall be sixty inches or more in height and:

(i) Shall not allow passage of a four-inch diameter sphere;

(ii) If it has horizontal members that are spaced less than forty-five inches between the tops of the horizontal members, shall have spaces between the vertical members no greater than a width of one and three-quarter inches (see Figure 090.1); or



(iii) If it has horizontal members that are spaced at, or more than, forty-five inches between the tops of the horizontal members, shall have spaces between the vertical members no greater than a four-inch width (see Figure 090.2); and



(iv) Shall have lockable gates and entrances provided with a self-closing, self-latching mechanism fifty-four inches or more from the ground with a clear space fifty inches deep on the latch side of the door to position a wheelchair. When a latching mechanism is provided at any lower height, the latching mechanism shall be of a type remaining continuously locked, and only opening with the use of a key or other access control system.

(b) At outdoor facilities not a part of living facilities, such as in a municipal park, a barrier six feet or more shall be provided to prevent unauthorized access;

(c) Restricted area service entrances shall be exempt from door or gate requirements providing no public access is available;

(d) Lifeguarded pools are not required to have a self-closing, self-latching gate during the period a pool is in use. Facility gates shall be closed and locked during nonuse periods; and

(e) An entrance to the pool area which shall not serve as a required exit from another part of the building when there is a conflict with other codes or regulations.

(5) **Pool surfaces.** Owners shall ensure pool surfaces with:

(a) Materials complying with subsection (2) of this section;

(b) Water tight and nonabrasive construction; and

(c) White or light color finish not obscuring the view of objects or surfaces;

(d) Surfaces not causing cutting, pinching, puncturing, entanglement, or abrasion hazard under casual contact; and

(e) Construction tolerances conforming with current NSPI public pool standards.

(6) **Pool general floor and wall dimensional design.** Owners shall ensure pool dimensional designs for floors and walls provide for safety, circulation, and quality of the water including, but not limited to:

(a) Uniform pool floor slopes as follows:

(i) Pools fifteen hundred square feet or more providing a maximum slope of one foot drop in twelve feet of run at pool depths to five and one-half feet;

(ii) Where diving provisions are included, floor slopes not intruding into the area designated as the diving envelope; and

(iii) A slope change transition zone (breakpoint from shallow to deep areas of pool) providing warning of the break in slope into diving or deep pool areas consisting of a two-foot wide ramp sloped at twice the slope of the shallow bottom.

(b) Pool vertical walls may be curved, not to exceed allowable radius, to join the floor for minimum distance as noted under Table 050.1 [090.3] of this section. Vertical means walls not greater than eleven degrees from plumb:

(i) Coving or portion of the side wall of a pool diving area shall conform as required and as described under subsection (7) of this section; and

(ii) In new construction or alterations to existing construction, ledges are prohibited.

(c) A maximum intrusion for pool walls beyond the vertical, as defined under subsection (6)(b) of this section, with

any configuration not to exceed a transitional radius from wall to floor where floor slopes join walls and which has:

(i) Center of radius not less than the minimum vertical depth specified under Table 090.3 of this section below the water level;

(ii) Arc of radius tangent to the wall; and

(iii) Maximum radius of coving, or any intrusion into the pool wall/floor interface, determined by subtracting the vertical wall depth from the total pool depth.

TABLE 090.3

MAXIMUM RADIUS COVING OR POOL INTRUSION DIMENSIONS BETWEEN POOL FLOOR AND WALL*

Pool Depth	2'0"	3'0"	3'6"	5'0"	>5'0"
Minimum Sidewall Vertical Depth (Springline)	1'6"	2'2"	2'6"	3'6"	@>3'6"
Maximum Radius of Curvature	6"	10"	12"	1'6"	**Maximum radius equals pool depth minus the vertical wall depth

NOTE: * For pool depths falling between the depths listed, values can be interpolated.
 ** Radius of coving cannot intrude into pool within diving envelope.

(7) **Specific design requirements for pools furnishing areas for diving.** Owners shall ensure provision of diving envelopes in pools or areas of pools designated for diving activities to include a diving envelope not less than the:

(a) APHA standard configuration noted under figure 090.4 of this section in areas where user would enter from the deck level twelve inches or less from water level. This requirement is based on a standard described under APHA public pool regulations, 1981, for pool type described under D-8.01 Table 1, the section noting the requirements from deck level;

(b) CNCA standard configuration noted under figure 090.5 of this section in areas where the user would enter from the deck level over twelve inches from water level, or has a platform or diving board provided at a height of less than one-half meter (twenty inches). This requirement is based on a standard described under CNCA publication **Swimming Pools: A Guide to their Planning, Design, and Operation** 1987, Fourth Edition. Human Kinetics Publisher, Inc., Champaign, Illinois, figure 8.1; and

(c) FINA standard configuration noted under figure 090.6 of this section in areas where the user would enter from the diving board or platform at a height of one-half meter (twenty inches) or greater. This requirement is based on a standard described in FINA publication **FINA Handbook, 1986-88**, constitution and rules governing swimming, diving, water polo, and synchronized swimming, 1986-88. Edited by E. Allen Harvey, Vancouver, Canada VGN 3R6, Section D, pp. 114-115.

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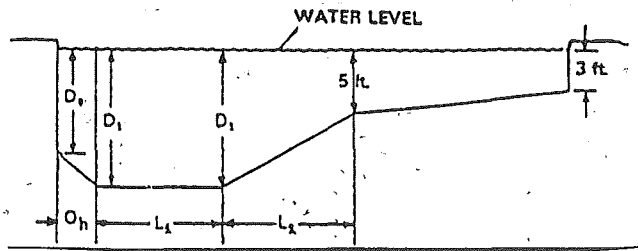
FIGURE 090.4
 MINIMUM DIMENSIONS FOR POOLS WITH DIVING FROM DECK LEVEL WHICH IS LESS THAN TWELVE INCHES FROM THE WATER LINE
 APHA STANDARDS*
 D-8 DIVING AREA REQUIREMENTS

D-8.01

The dimensions of the diving area on all swimming pools providing diving from deck level shall conform to the following dimensions:

Table 1. The diving area dimensions on all swimming pools providing diving from deck level.

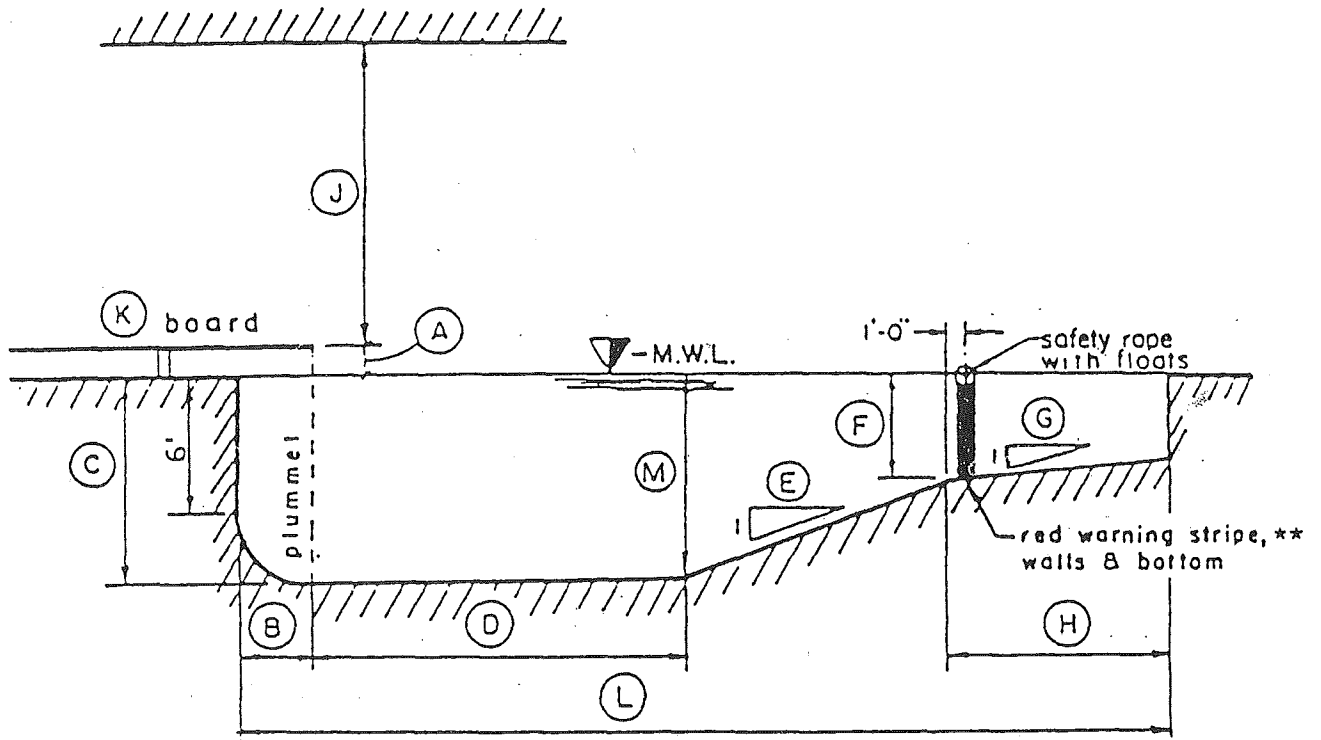
Heights	Lengths			
	Water	Depths	Length of Diving Well	Run-Out
Height of Deck Above Water Level				
H	D(0)	D(1)	L(1)	L(2)
12" or less	6 ft	8.5 ft	12 ft	10.5 ft
Over 12 inches	See standards for over twelve inches as applicable (either CNCA or FINA in inches following subsections).			



NOTE: * The department underlined areas for clarification.

Figure 090.5
Minimum dimensions for pools with boards or platforms at a height of less than 1/2 meter (20 inches)

CNCA STANDARDS

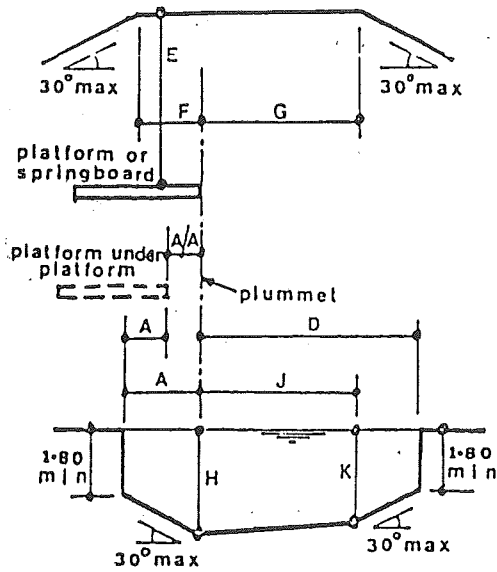


Dimension	Minimum	Preferred or Maximum
A Height of board above water		20 in.
B Board overhang	2 ft 6 in.	3 ft
C Depth of water at plummet	9 ft	10 ft *
D Distance from plummet to start of upslope	16 ft	18 ft *
E Inclination of upslope of bottom		1:3
F Depth of water at breakpoint	4 ft 6 in.	
G Slope of bottom in shallow portion of pool	1:12	1:15 *
H Length of shallow section of pool	8 ft	14 ft *
J Distance to any overhead structure	13 ft	15 ft *
K Board length		12 ft
L Length of pool	40 ft	50 ft *
M Dimension not less than C minus	6 in.	

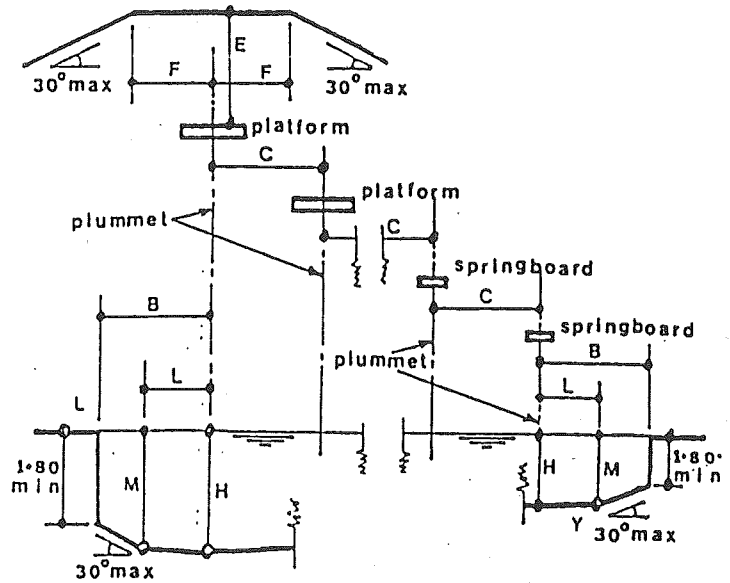
NOTE (FROM FIGURE 090.5):

- * Values with asterisks are not to be considered as maximums.
- ** Warning stripe at break point may be of any contrasting color.

FIGURE 090.6
MINIMUM DIMENSIONS FOR POOLS WITH BOARDS OR PLATFORMS
AT A HEIGHT OF 1/2 METER OR MORE
FINA STANDARDS



LONGITUDINAL SECTION
DIAGRAMMATIC ONLY



CROSS SECTION
DIAGRAMMATIC ONLY

FINA Dimensions for Diving Facilities		Dimensions are in Metres	Springboard		Platform					
			1 Metre	3 Metres	1 Metre	3 Metres	5 Metres	7.5 Metres	10 Metres	
LENGTH		4.80	4.80	4.50	5.00	6.00	6.00	6.00		
WIDTH		0.50	0.50	0.60	1.50	1.50	1.50	2.00		
HEIGHT		1.00	3.00	0.60-1.00	2.60-3.00	5.00	7.50	10.00		
Revised to 1st Jan 1987										
			HORIZ VERT	HORIZ VERT	HORIZ VERT	HORIZ VERT	HORIZ VERT	HORIZ VERT	HORIZ VERT	HORIZ VERT
A	From plummet BACK TO POOL WALL	DESIGNATION	A-1	A-3	A-1pl	A-3pl	A-5	A-7.5	A-10	
		MINIMUM	1.80	1.80	0.75	1.25	1.25	1.50	1.50	
A/A	From plummet BACK TO PLATFORM plummet directly below	DESIGNATION					AAS/1	AA5/3/1	AA10/5/3/1	
		MINIMUM					1.50	1.50	1.50	
B	From plummet to POOL WALL AT SIDE	DESIGNATION	B-1	B-3	B-1pl	B-3pl	B-5	B-7.5	B-10	
		MINIMUM	2.50	3.50	2.30	2.90	4.25	4.50	5.25	
C	From plummet to ADJACENT PLUMMET	DESIGNATION	C-1/1	C-3/3/1	C-1/1pl	C-3/1/1/3pl	C-5/3/1	C-7.5/5/3/1	C-10/7.5/5/3/1	
		MINIMUM	2.40	2.60	1.65	2.10	2.50	2.50	2.75	
D	From plummet to POOL WALL AHEAD	DESIGNATION	D-1	D-3	D-1pl	D-3pl	D-5	D-7.5	D-10	
		MINIMUM	9.00	10.25	8.00	9.50	10.25	11.00	13.50	
E	On plummet, from BOARD TO CEILING	DESIGNATION	E-1	E-3	E-1pl	E-3pl	E-5	E-7.5	E-10	
		MINIMUM	5.00	5.00	3.50	3.50	3.50	3.50	5.00	
F	CLEAR OVERHEAD behind and each side of plummet	DESIGNATION	F-1	F-3	F-1pl	F-3pl	F-5	F-7.5	F-10	F-10
		MINIMUM	2.50	5.00	2.50	5.00	2.75	3.50	2.75	3.50
G	CLEAR OVERHEAD ahead of plummet	DESIGNATION	G-1	G-3	G-1pl	G-3pl	G-5	G-7.5	G-10	G-10
		MINIMUM	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
H	DEPTH OF WATER at plummet	DESIGNATION	H-1	H-3	H-1pl	H-3pl	H-5	H-7.5	H-10	
		MINIMUM	3.50	3.80	3.30	3.60	3.90	4.50	5.00	
J	DISTANCE AND DEPTH ahead of plummet	DESIGNATION	J-1	K-1	J-3	K-3	J-1pl	K-1pl	J-3pl	K-3pl
K		MINIMUM	5.00	3.60	6.00	3.70	5.00	3.20	6.00	3.50
L	DISTANCE AND DEPTH each side of plummet	DESIGNATION	L-1	H-1	L-3	H-3	L-1pl	H-1pl	L-3pl	H-3pl
M		MINIMUM	1.50	3.60	2.00	3.70	1.40	3.20	1.80	3.50
N	MAXIMUM SLOPE TO REDUCE DIMENSIONS beyond full requirements	POOL DEPTH	30 degrees							
		CEILING HT	30 degrees							
				NOTE	Dimensions C (plummet to adjacent plummet) apply for Platform with widths as detailed. For wider Platforms increase C by half the additional width(s)					

(8) **Pool appurtenances.** Owners shall ensure swimming pools:

(a) Have handholds around the perimeter in pools two feet or more in depth. Handholds shall be four feet or less apart and consist of any one or a combination of the following:

(i) Coping, ledges, radius flanges, or decks along the immediate top edge of the pool or suitable slip-resisting handholds located twelve inches or less above the waterline;

(ii) Ladders or steps; or

(iii) Secured rope or railing twelve inches or less above the water line.

(b) Have stairs, ladders, or stepholes with:

(i) Stairs, when provided, meeting the following construction requirements:

(A) Nonslip tread finish;

(B) Contrasting color stair tread edges clearly visible to users;

(C) Recessed in pool areas used for lap or competitive swimming to prevent intrusion into the activity areas;

(D) Handrails with the leading edge for stairs at pool entry/exit being neither eighteen inches or more beyond nor eight inches or more inside (horizontally) the vertical plane of the bottom riser;

(E) Riser treads with a minimum unobstructed, horizontal, ten-inch tread depth and a minimum two-hundred-forty-inch surface area;

(F) Riser heights, on general use pools fifteen hundred square feet or more, uniform and seven and one-half inches or less, except the bottom riser may be less than the uniform height; and

(G) Riser heights, on general use pools less than fifteen hundred square feet, and limited use pools, uniform and have a preferred seven-and-one-half-inch height, but not greater than ten inches, except the bottom riser may be plus or minus two-inches of the uniform height.

(ii) Ladders or stepholes:

(A) Spaced at a minimum of one for every seventy-five feet of pool perimeter deeper than four feet;

(B) Provided at both sides of the deep end of pools over thirty feet in width; and

(C) Equipped with a handrail at the top of both sides extending over the coping or deck edge.

(iii) Means of access at the shallow end of the pool; and

(iv) Designs permitting entry and exit for impaired or handicapped persons are encouraged.

(c) Diving boards and diving platforms, when provided, shall:

(i) Be installed according to manufacturer's instructions;

(ii) Have slip-resistant tread surfaces;

(iii) Have steps and ladders leading to diving boards which provide handrails.

(iv) Be protected with forty-two inch high guardrails extending at least to the water edge when one meter or more above the water.

(d) Starting blocks, when provided, shall:

(i) If on the shallow end of pool, be removed when not in use by the competitive swimmers trained in starting blocks proper use; and

(ii) Be firmly secured when in use.

(e) Water slides, when provided, shall:

(i) Be installed according to manufacturer's instructions and be approved by the manufacturer for general use and limited use pools; and

(ii) Conform to Part 1207 of the Consumer Product Safety Act (Sec. 7(f), P.L. 92-573, 86 Statute 1215, 15 U.S.C. 1056(f)); or

(iii) If not manufactured for general use and limited use pools, conform to requirements under chapter 246-262 WAC, Recreational Water Contact Facilities.

(9) **Turnover.** Owners shall ensure pools turn over entire pool water volume in six hours or less. Exceptions to recirculation requirements may be made for flow-through pools in the following conditions where:

(a) Water supply is sufficient to provide the same turnover period specified for recirculation pools;

(b) The source water supply meets acceptable quality requirements and is subject to a disinfection method as described under WAC 246-260-070(3);

(c) The introduction of fresh treated pool water is accomplished by the same type of inlet and outlet design required for recirculation pools; and

(d) The pool water quality complies with WAC 246-260-070.

(10) **Pool depth markings.** Owners shall provide depth markings:

(a) Plainly marking the water depth in feet on the vertical wall at or above the water level and on the horizontal surface of the coping or deck edge;

(b) Positioned on the vertical pool wall to be read from the water side. Where markings cannot be placed above the water level, markings shall be placed in other areas and plainly visible to users in the pool;

(c) Located on the coping or deck within eighteen inches of the water edge and positioned to be read while standing on the deck facing the water;

(d) Which are slip resistant;

(e) Placed at the maximum and minimum water depths and at all points of slope change;

(f) Installed at intermediate increments of water depth not to exceed two feet, nor spaced at distances greater than twenty-five foot intervals;

(g) Uniformly arranged on both sides and ends of the pool;

(h) On irregularly shaped pools, meeting the requirements in subdivision (a) through (g) of this subsection and also designate the depths at all major deviations in shape;

(i) With a four-inch minimum height on the deck and a two-inch minimum height on the vertical pool wall; and

(j) Applied in a contrasting deck color which does not fade.

(11) **Safety line or marking line.** Owners shall provide safety (float) lines or marking lines (lines on pool sides and bottom) separating areas where the pool slope breaks from a uniform slope leading from shallow to deeper water.

(a) Safety lines when used shall:

(i) Be kept in place at all times, except when the pool is used for a specific purpose such as lap swimming or competitive use;

(ii) Be placed one foot toward the shallow end away from the break point line. See subsection (6)(a)(iii) of this section;

(iii) Be strung tightly allowing the bather to hold onto the line for support;

(iv) Have a receptacle for receiving the safety line:

(A) Recessed in the wall; or

(B) Not constituting a safety hazard when the safety line is removed.

(v) Provide floats on the line at a minimum distance of every four feet.

(b) Markings lines when used shall:

(i) Provide a minimum three-inch wide marking line at the break point where the pool slope breaks from a uniform slope leading from shallow to deeper water; and

(ii) Be of a contrasting color to the background color of the pool sidewalls and floor.

(c) In pool facilities with uniform slopes not exceeding one foot in twelve feet to deep portions of the pool, a safety line or marking line shall not be required.

(12) **Bather load.** Owners shall ensure maximum number of bathers in the pool facility at any one time do not exceed a number determined by the formula noted under Table 090.7 of this section.

TABLE 090.7
SWIMMING POOL MAXIMUM BATHING LOAD*
(SPMBL)

$$SPMBL = \frac{A - S}{(30)} + \frac{S}{(15)} \quad \text{For outdoor pools}$$

$$SPMBL = \frac{A - S}{(30)} + \frac{S}{(25)} \quad \text{For indoor pools}$$

Where

A = Total area of water surface in square feet

S = Area of pool less than 5 feet deep in square feet

NOTE: * This formula will be used in determining certain features of pools as noted elsewhere in these rules and regulations.

(13) **Inlets.** Owners shall provide pool inlets:

(a) Submerged and located to produce uniform water and chemical circulation throughout the pool; and

(b) Located on the bottom of pools twenty-five hundred square feet or more, unless otherwise justified by the design engineer to the department's or local health officer's satisfaction.

(14) **Outlets.** Owners shall provide pool outlets with:

(a) Overflow and main drain grating systems each designed to carry one hundred percent of the total recirculation filter flow and main drain piping designed to carry fifty percent or more of total recirculation filter flow;

(b) Overflow outlets that maintain:

(i) A minimum of sixty percent of filter recirculation flow at all times; and

(ii) An overflow channel which may be used on any pool and required on pools twenty-five hundred square feet or more on the pool perimeter to promote uniform circulation and skimming action of the upper water layer with:

(A) A design preventing all matter entering the channel from returning to the pool;

(B) Dimensions minimizing the hazard for bathers, such as catching arms or feet;

(C) One one-hundredth of a foot slope per foot or more;

(D) Drains sufficiently spaced and sized to collect and remove overflow water to return line and filter, where applicable; and

(E) Size sufficient to carry one hundred percent of the recirculation flow plus the surge flow equivalent to one-fifth of the balancing tank expressed in gallons per minute.

(iii) Skimmers in lieu of pool overflow channels up to twenty-five hundred square feet if:

(A) Weir provided in skimmer has a maximum flow rate through skimmer not exceeding four gpm per inch of weir;

(B) Devices are recessed in the pool wall so no part protrudes beyond the plane of the wall into the pool;

(C) The skimmer is equipped with a device to prevent air lock in the recirculation suction line, such as, an equalizer line;

(D) The skimmer is equipped with a removable and cleanable screen designed to trap large solids;

(E) Automatically adjustable and operates freely with continuous skimming action to continue through all designed loading rates. Displacement shall be computed at fifteen gallons per bather.

(c) Main drains in all pools with:

(i) Location at the pool's low points;

(ii) A minimum of two main drains spaced:

(A) Twenty feet or less apart nor closer than six feet; or

(B) As far as possible from each other in pools seven feet or less linear floor distance.

(iii) Total open area of grates sized to prevent a suction or entrapment hazard dangerous to user;

(iv) Grates on drains with:

(A) Maximum flow of one and one-half feet per second; or

(B) Net outlet area four times or more the area of the discharge pipe.

(v) Openings not allowing a sphere over one-half inch in diameter to pass;

(vi) Grates designed to withstand forces of users;

(vii) Grates removable only with specific tool; and

(viii) Means to control flow from recirculation pump or balancing tank.

(15) **Flow.** Owners shall maintain pool recirculation flow not to exceed:

(a) Six feet per second in valved suction or discharge side of the pump; and

(b) Ten feet per second in open discharge pipes on the pressure side of the pump or filter discharge. The recirculation flow limit does not apply to the return inlet and the last two feet of pipe leading to the inlet.

(16) **Balancing tanks.** Owners with overflow channels requiring balancing tanks shall:

(a) Maintain volume equivalent to fifteen times maximum bathing load expressed in gallons; and

(b) Increase capacity as necessary to provide volume for make-up water and to prevent air lock in the pump suction line.

(17) **Pumps.** Owners shall have and maintain recirculation pumps with adequate capacity to:

(a) Provide design flows and pressure for water recirculation over the entire operating filter pressure;

(b) Allow proper back washing of filters when specified; and

(c) Have self-priming capability when installed above pool water level.

(18) **Strainers.** Where pumps precede the filter, owners shall equip pool recirculation facilities with hair and lint strainers which shall:

(a) Be located upstream of recirculation pumps;

(b) Provide strainer screen sufficiently strong to prevent collapse when clogged;

(c) Have an openable cover; and

(d) Provide valving to isolate the strainer when located below pool water level.

(19) **Valves.** Owners shall provide valves at appropriate locations to allow isolation and maintenance of equipment.

(20) **Equipment rooms.** Owners shall provide equipment rooms:

(a) Enclosing pumps, disinfection equipment, filters and other electrical and mechanical feed equipment and associated chemicals. Chemical storage shall conform to manufacturer requirements;

(b) Providing work space and access to perform routine operations;

(c) With a forty-six-square-foot minimum floor area and provide a three-foot minimum access area to service equipment;

(d) With one floor drain or more and a floor slope to the drain at a one-fourth-inch-per-foot minimum;

(e) Ready access if below grade;

(f) Ventilation;

(g) Twenty foot-candles or more of light measured thirty inches from the floor; and

(h) Kept locked.

(21) **Make-up water.** Owners shall ensure a source of make-up water and associated piping at the pool:

(a) Providing sufficient quantity to replace daily pool losses;

(b) Coming from a supply conforming with chapter 246-290 WAC;

(c) Preventing cross connections using a minimum air gap of two pipe diameters or approved backflow prevention devices between the make-up water source and the pool water or waste water; and

(d) If using a pool fill spout, not projecting greater than one inch into the space above the water surface area and shielded to not create a deck hazard.

(22) **Filters.** Owners shall equip pools with filtration equipment:

(a) Meeting the applicable standards of NSF or equivalent;

(b) Using acceptable type and filter rates described under Table 050.6 of this section;

(c) Having pressure or vacuum gauges for measuring loss of head through the filter with minimum of one gauge preceding and one gauge following the filter;

(d) Having a rate of flow indicator to measure flow which has accuracy, repeatability, and durability equivalent to flow meters meeting NSF standards; and

(e) Having a means of discharging filter backwash to waste with:

(i) Discharge in a manner not creating a public nuisance; (ii) Disposal in accordance with applicable local laws or regulations;

(iii) Minimum air gap of two pipe diameters to prevent cross-connection from waste discharge and recirculation system piping;

(iv) Discharge receptor and piping of sufficient size to accept backwash water and prevent flooding; and

(v) Ability to monitor filter effluent during backwash, that is, use of a sight glass.

(f) Providing means to release air entering the filter tank on pressure filters;

(g) When cartridge filters are used:

(i) Provide with an extra set of cartridges; and

(ii) Have any bypass valves in a permanently closed position.

(h) When using pressure DE filters with separation tanks:

(i) Provide a means of air release or a lid providing a slow and safe release of pressure; and

(ii) Show a readily visible user warning that the air release must be opened before starting the circulation pump.

TABLE 090.8
TYPE AND RANGE OF FILTERS FOR SWIMMING POOLS

Range of Acceptable Filter Rate Type of Filter Media	Expressed in gpm/Square Feet	
	Minimum	Maximum
Sand		
Rapid Sand or Pressure Sand	—	3
High Rate Sand Pressure or Vacuum	10	18*
	Continuous Feed	Manual Feed
D.E.		
Pressure	0.8	1.0
Vacuum	1.0	1.35
Cartridge**		.375

NOTE:

* Filters which are sized at maximum application rate shall be equipped with flow control valves to maintain flow equilibrium to account for varying filter pressures and consequent flow production.

** Cartridge filters shall have a nominal micron rating of twenty microns or less.

(23) **Disinfection equipment.** Owners shall provide disinfection equipment:

(a) Providing a continuous and effective disinfectant residual in the water;

(b) Using a disinfectant with an easily monitored residual;

(c) Having a design feed rate providing effective disinfection levels when the pool is in peak demand conditions;

(d) Having easily cleanable equipment and piping used to apply chemicals and with provisions to prevent undue clogging. All materials shall be resistant to action of chemicals used;

(e) Conforming to NSF standards if disinfection equipment has:

(i) Adjustable output rate chemical feed equipment for liquid solutions. The equipment shall:

(A) Feed under positive pressure in the recirculation system;

(B) Provide means for dosage adjustment;

(C) Have provisions to prevent hypochlorite solution siphoning when equipment is turned off. This applies when the disinfection equipment is above pool water level.

(ii) Flow through chemical feed for solid feed material. Solid tablets or granules shall not be placed in skimmer baskets accessible to the public.

(f) Allowing hand feeding on an emergency basis only;

(g) Meeting the following conditions when using chlorine gas:

(i) Chlorine rooms shall:

(A) Be above ground level;

(B) Be constructed so all openings or partitions with adjoining rooms are sealed;

(C) Be located with consideration of prevailing winds to dissipate leaked chlorine away from the pool facility;

(D) Have door opening outward only and to the out-of-doors;

(E) Provide a sign on the door exterior reading DANGER CHLORINE. The sign shall be large enough to be read twenty-five feet away.

(ii) Chlorine rooms shall have mechanical exhausting ventilation including:

(A) Air inlet located as far as possible from fan intake to promote good air circulation patterns;

(B) Minimum of one air change per minute in the chlorine room when fan is operating;

(C) A remote switch outside the room or a door-activated switch to turn on fan before entering;

(D) Suction for fan near the floor;

(E) Exhaust for fan and chlorinator vent located to prevent contaminating air intake and prevent undue hazard for the pool facility users; and

(F) Screened chlorinator vent.

(iii) Gas chlorine systems shall:

(A) Be vacuum injection type, with vacuum-actuated cylinder regulators;

(B) Provide integral backflow and anti-siphon protection at the injector; and

(C) Provide taring (net weight of cylinder gas) scales for determining chlorine weight.

(iv) Breathing protection available in an accessible area for the operator outside of the chlorine room including:

(A) Self-contained breathing apparatus designed for use in a chlorine atmosphere for working with chlorine leaks and maintained in accordance with department of labor and industries standards; or

(B) Provisions to substitute breathing protection at the site, if procedures can be established and documented with emergency service fire districts or other approved organization within the area for promptly responding to chlorine leaks.

(v) Means for automatic shutoff when pool flow is interrupted; and

(vi) Chlorine gas cylinders shall:

(A) Be stored only in chlorine rooms;

(B) Have approved valve-stem cylinder wrench on the valve stem to shut the system down in an emergency event;

(C) Be properly secured to prevent tipping;

(D) Be tagged to indicate cylinders are empty or full; and

(E) Not exceed one hundred fifty pounds tare weight per cylinder. If one-ton cylinder use is desired, an engineer specializing in chlorine design shall prepare a design proposal for department consideration.

(24) **Chemical feeding equipment for pH control.** Owners applying chemicals for controlling pH through chemical feed equipment shall provide equipment with:

(a) Adequate size and design to allow routine cleaning and maintenance;

(b) Materials resistant to chemical action;

(c) Means for automatic shut off when pool flow is interrupted;

(d) Chemical feed equipment for pH control on pools fifty thousand gallons volume or greater;

(e) Any pool feeding with:

(i) Caustic soda (NAOH);

(ii) Carbon dioxide (CO₂); or

(iii) Other chemicals the department determines necessary to require metered and controlled feeding.

(25) **Heaters.** Where pool heating equipment is provided, owners shall:

(a) Locate equipment so any standing pilot is readily accessible; and

(b) Install equipment per NEC and UMC.

(26) **Ventilation.** Owners shall provide indoor pool facility ventilation conforming with ASHRAE pool facility standards.

(27) **Testing equipment.** Owners shall use testing equipment as noted in the water quality section under WAC 246-260-070(6).

(28) **Chemical storage.** Owners shall ensure chemical storage design and placement minimizes safety risks.

(29) **Restroom, locker room, and plumbing fixtures.** Owners shall provide restroom, locker room, and plumbing facilities at pools as follows:

(a) General use swimming pool facilities with:

(i) Minimum components including:

(A) Dressing rooms;

(B) Showers;

(C) Toilets and urinals;

(D) Lavatories; and

(E) Hose bibs.

(ii) A design providing easy accessibility to toilet and shower facilities by users with minimum cross traffic of non-users;

(iii) Locker rooms including:

(A) Separate facilities for both sexes with provisions to block line of sight into locker rooms;

(B) Nonslip floors with suitable drains;

(C) Junctions between walls and floors coved for ease of cleaning; and

(D) Adequate ventilation to prevent moisture build-up in the facility.

(iv) Plumbing fixtures as described under Table 050.7 of this section;

(v) Shower facilities that:

(A) Deliver water at a temperature range of ninety to one hundred ten degrees Fahrenheit; and

(B) Provide single service soap in nonglass dispensers.

- (vi) Flush toilets and toilet tissue in dispensers;
 - (vii) Sinks provided with:
 - (A) Tempered or hot and cold running water;
 - (B) Single service soap in nonglass dispensers; and
 - (C) Single service towels or electric hand dryers.
 - (viii) Hose bibs with vacuum breakers provided:
 - (A) At a maximum spacing of one hundred fifty feet around pool deck; and
 - (B) Within the equipment room at facilities having pools fifteen hundred square feet or more.
 - (ix) Janitor sink with a vacuum breaker at pools greater than fifteen hundred square feet; and
 - (x) Sewage disposed of in a manner approved by the department or local health officer.
- (b) Limited-use swimming pool facility plumbing as described under Table 050.8 [090.10] of this section.

TABLE 090.9

PLUMBING FIXTURE MINIMUM REQUIREMENTS FOR GENERAL USE SWIMMING POOLS AMOUNT OF FIXTURES REQUIRED FOR OCCUPANCY LOAD BY SEX

Type of Fixture		Male	Female
1. Toilets	up to 120	1/60	1/40
	from 121-360 add	1/80	1/60
	over 360 add	1/150	1/100
2. Urinals	up to 120	1/60	NA
	from 121-360 add	1/80	
	over 360 add	1/150	
3. Showers	up to 120	1/40	1/40
	from 121-360 add	1/60	1/60
	over 360 add	1/100	1/100
4. Sinks	up to 200	1/100	1/100
	from 201-400 add	1/200	1/200
	over 400 add	1/400	1/400
5. Hose bibs	One hose bib accessible to each locker room and provided with a vacuum breaker.		
6. Janitor sink	One*		

NOTE * Required for pools 1500 square feet or greater.

TABLE 090.10

PLUMBING FIXTURE MINIMUM REQUIREMENT FOR LIMITED USE SWIMMING POOLS

Pools with:	Toilets	Showers	Sinks	Dress.Rm.
1. Living units within 100 feet and less than 3 stories	-	-	-	-
2. Living units >100 feet but <500 feet and less than 3 stories.	1	-	1	-
3. Living units within 1/4 mile and/or with 3 or more stories.*	1(M)	-	1(M)	-
	1(F)	-	1(F)	-
4. Living units greater than 1/4 mile.**	1(M)	1(M)	1(M)	1(M)
	1(F)	1(F)	1(F)	1(F)

NOTE: * Consideration for elevators adjacent to pool may allow variance from this requirement.

** When pool bathing load for the proposed facility exceeds a capacity of 150 people, the fixture units provided at limited use facilities shall conform with the general use requirements in Table 090.9.

(c) If owners limit the number of people within their facility to a certain number and post maximum occupancy loading, the number of plumbing fixture units may be based on that maximum occupancy.

(30) **Lighting.** Owners shall design and maintain pool facility lighting to:

(a) Illuminate indoor facilities, outdoor facilities used after dusk, and locker room facilities with a minimum lighting intensity maintained thirty inches above any walking surface, pool deck, or pool area of:

- (i) Thirty foot-candles at indoor facilities;
 - (ii) Fifteen foot-candles at outdoor facilities;
 - (iii) Twenty foot-candles in locker rooms.
- (b) Allow lifeguards or attendants to clearly see pool areas and walking surfaces;
 - (c) Meet any additional lighting requirements deemed necessary by the department or local health officer;
 - (d) Provide protective shielding for all lighting fixtures above walking surfaces and pool areas; and
 - (e) Provide all indoor facilities with one or more pool area emergency lights designed to turn on in the event of a power failure. The emergency lighting shall conform to requirements of UL standard 924.

(31) **Emergency equipment.** Owners shall provide first aid and emergency equipment readily available during operating hours as follows:

- (a) General use swimming pool facilities:
 - (i) A telephone within the facility with a prominently displayed list of emergency medical service response numbers;
 - (ii) Sufficient and suitable area provided to accommodate persons within the facility requiring first aid treatment and necessary first aid equipment;
 - (iii) A supplied first aid kit as follows:
 - (A) For general use pools fifteen hundred square feet or more, a standard twenty-four unit kit;
 - (B) For general use pools less than fifteen hundred square feet and limited use pools, a standard sixteen unit kit;
 - (iv) Two or more blankets reserved for emergency use;
 - (v) A backboard with means to secure victim to board and provide immobilization of head, neck, and back at pools requiring lifeguards;
 - (vi) Devices to aid victims in distress as follows:
 - (A) For pools with width less than twenty-four feet, rescue poles one-half the pool width or more;
 - (B) For pools with width twenty-four feet or more, rescue poles twelve feet or more in length;
 - (C) One or more of the poles with a double crook life hook in pools without lifeguards;
 - (D) One or more reaching poles for every fifteen hundred square feet of pool surface area;
 - (E) Throwing ring buoy, heaving jug, heaving line, throw-rope bag, or other similar devices with rope the width of the pool or fifty feet, whichever is less for reaching and retrieving victim;
 - (F) Rescue tube or rescue buoy at each lifeguard station.
- (b) Limited use swimming pool facilities:
 - (i) During period facility is open for use, one of the following:
 - (A) A telephone within one minute access;
 - (B) Alternate means of reaching emergency medical service response numbers;
 - (C) Provision of an audible emergency alarm to alert others at area of need to respond.
 - (ii) Comply with requirements under subsection (31)(a)(iii), (iv), and (vi) of this section.

(32) **Lifeguard chairs.** Owners shall provide lifeguard chairs as follows:

(a) Where lifeguards are required and pools have depths greater than five feet, at least one lifeguard chair shall be provided adjacent to the deep area of the pool;

(b) Installed to manufacturer standards.

(33) **Signs.** Owners shall provide signs at pools which must convey the following conditions, but may be conveyed by any combination of words, pictures, or symbols:

(a) Prohibition of running or horseplay;

(b) Prohibition of use by persons with communicable diseases;

(c) Prohibition of use by persons under the influence of alcohol or drugs;

(d) Requirement for a cleansing shower before entering the pool;

(e) Warning that persons refusing to obey the regulations are subject to removal from the premises;

(f) Prohibition of food or drink in the pool water;

(g) In pools where lifeguards are not present, post requirements for facility use as described under WAC 246-260-100 (3)(b)(iii) and (c);

(h) Location of nearest telephone for emergency use or emergency notification procedure.

(34) **Food service.** When food service is provided, owners shall:

(a) At general use pool facilities, ensure food and beverage sale and consumption areas are separated from pool and deck enclosure areas. Special provisions may be made for allowing food and beverage service on the walkway provided a minimum six feet clear area is maintained between the pool edge and any tables or chairs provided for special facility functions;

(b) At limited use pool facilities, prohibit food and beverage in the pool water and maintain a minimum four foot clear area between pool edge and any tables and chairs provided for food service;

(c) At general use pool facilities, prohibit alcohol;

(d) At limited use pool facilities, when alcohol is sold within the pool facility, provide an attendant at the pool area;

(e) Provide trash containers;

(f) Prohibit glass containers in the pool facility.

(35) **Drinking fountain.** Owners shall provide an operable drinking fountain at general use swimming pools fifteen hundred square feet or more. Drinking fountains shall conform with American Standards Association requirements.

(36) **Foot baths.** Owners shall prohibit the use of foot baths at water recreation facilities. This does not preclude use of foot showers, provided the area is well drained.

[Statutory Authority: RCW 70.90.120.92-02-020 (Order 226B), § 246-260-090, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.91-02-051 (Order 124B), recodified as § 246-260-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120.90-07-010 (Order 042), § 248-98-050, filed 3/12/90, effective 4/12/90; § 248-98-050, filed 10/3/67; Regulation .98.050, effective 3/11/60.]

WAC 246-260-100 Operation of swimming pool facilities. (1) **Operation plan.** Owners shall ensure proper operation to protect the public health, safety, and water qual-

(2003 Ed.)

ity by establishing practices and developing an operations manual addressing each of the following:

(a) Physical pool facility components;

(b) Personnel;

(c) Users and spectators;

(d) Environmental conditions.

(2) **Physical components.** Owners shall provide routine checks of the physical components:

(a) Ensuring all structural facilities which the users come in contact are intact and free from undue wear or fatigue and replaced as needed;

(b) Eliminating adverse affects of water ponding on walking surfaces;

(c) Ensuring preventive maintenance on equipment essential for protection of the public health, safety, and water quality;

(d) Ensuring any necessary emergency equipment is available and in good repair;

(e) Maintaining barrier protection;

(f) Ensuring common articles such as towels, bathing suits, bathing caps, etc., for patron use are sanitized before reuse if provided for patrons; and

(g) Ensuring treatment and turnover times are continuous twenty-four hours a day during seasons or periods of use and do not exceed six hours provided:

(i) Allowances shall be made for minor equipment maintenance;

(ii) Pools previously approved with turnover rates varying from subsection (2)(g)(i) of this section may continue to operate if water quality conditions conform with WAC 246-260-070.

(3) **Required personnel.** Owners shall ensure appropriate personnel at pool facilities as follows:

(a) General use pool facilities having one or more pools fifteen hundred square feet or more in surface area shall have lifeguards present at all times pools are in use, except:

(i) Pools having surface area less than twenty-five hundred square feet, four and one-half feet or less in depth, limiting use from two to ten adults in the pool are not required to have a lifeguard;

(ii) When swim teams are facility users, the owner may allow substitution of qualified coaches. See subsection (5) of this section to substitute for a lifeguard for guarding of a swim team.

(b) General use pool facilities less than fifteen hundred square feet shall provide lifeguards or attendants as follows:

(i) Lifeguards shall be present:

(A) If pool facility provides training for water safety and basic swimming instruction for children twelve years of age or under; or

(B) If pool facility provides training for safety and basic swimming instruction for adults and the pool is over four feet deep; or

(C) When pool facility provides training, practice, and/or meets for swim teams, substitution may occur as described under subsection (3)(a)(ii) of this section.

(ii) Attendants or lifeguards shall be present when organized programs are provided at the pool facility, for example, teaching of adult swimming lessons in water four feet or less, formal exercise classes, and the like;

(iii) When no lifeguard or attendant is present, the facility use shall be limited by the following conditions:

(A) When pool is used by children twelve years of age or under, a responsible adult eighteen years of age or older shall accompany the children and be at the pool or pool deck at all times the children use the facility;

(B) When used by persons seventeen years of age or under, a minimum of two people at the pool facility at all times the pool is in use;

(C) Subdivision (b)(iii)(A) and (B) of this subsection posted.

(c) When lifeguards are not provided at limited use pool facilities, within the conditions noted in the definition for a limited use pool, use of the facility shall be limited by the following conditions:

(i) When the pool is used by children twelve years of age or under, a responsible adult eighteen years of age or older shall accompany the children and be at the pool or pool deck at all times the children use the facility;

(ii) When used by persons seventeen years of age or under, a minimum of two people at the pool facility at all times the pool is in use;

(iii) Subdivision (c)(i) and (ii) of this subsection posted and ongoing provisions to notify the responsible person of conditions for use of the facility.

(d) A water treatment operator.

(4) **Personnel duties and equipment.** Owners shall ensure the specific duties and equipment of designated personnel include:

(a) Lifeguards during periods of lifeguarding, guard users of the pool facility in areas assigned;

(b) Assistant lifeguards when provided at the pool used under the following conditions:

(i) Fifty percent or more of the persons assigned to guard on the deck are lifeguards;

(ii) Assistant lifeguards limited to guarding responsibility of areas four feet or less in depth; and

(iii) One or more lifeguards on duty trained at the equivalent of "lifeguard training" as recognized by the ARC or equivalent as recognized by the department.

(c) Attendants, when provided at pools not requiring lifeguards, oversee pool use by the bathers and provide supervision and elementary rescues such as reaching assists to bathers in need. This does not mean the person is qualified or trained to make swimming rescues;

(d) Qualified swimming coaches when substituting for lifeguards, guard swimming team at the pool facility in areas assigned;

(e) Water treatment operator oversees that the water treatment components are functioning adequately to protect public health, safety, and water quality;

(f) Notification of responsible persons on the conditions for facility use at pool facilities not requiring lifeguards, and for which no lifeguards or attendants are present. A responsible person means a person having responsibility for overseeing users seventeen years of age or under including, but not limited to a person:

(i) Renting an apartment, hotel, motel, RV camp site; or

(ii) Who is an owner or member of a condominium, homeowner's association, mobile home park, or private club with a pool facility.

(g) Lifeguards, assistant lifeguards, or attendants:

(i) Wearing a distinguishing suit, uniform, or emblem; and

(ii) Equipped with a whistle or a signaling device.

(5) **Personnel training.** Owners shall require training for each type of personnel including:

(a) Lifeguards shall maintain current certificates in the following:

(i) Standard first aid and adult, single rescue CPR through ARC or the American Heart Association; and

(ii) Advanced lifesaving, advanced lifesaving review, or lifeguard training through ARC; or

(iii) YMCA lifeguarding or crossover course through the YMCA; or

(iv) Lifeguard through the National Lifeguard Service, Canadian; or

(v) Lifeguard through the National Pool and Waterpark Lifeguard Training Course; or

(vi) Basic lifeguard through advanced lifeguard training international; or

(vii) Other training the department determines equivalent; and

(viii) Thirty-six months after enactment of the personnel training provisions of this chapter, the department will no longer recognize training for lifeguards in advanced lifesaving or advanced lifesaving review through the ARC.

(b) Assistant lifeguards shall maintain current certificates and meet the requirements in the following:

(i) Adult, single rescue CPR through ARC or the American Heart Association; and

(ii) Emergency water safety with ARC; or

(iii) Bronze medallion award through the Royal Lifesaving Society of Canada;

(iv) Shallow water lifeguard through the National Pool and Waterpark Lifeguard Training; or

(v) Other training the department determines equivalent; and

(vi) Be fourteen years of age or older.

(c) Swim coaches substituting for lifeguards with swim teams shall maintain current certificates through the following:

(i) Standard first aid and adult, single rescue CPR through ARC or the American Heart Association; and

(ii) Safety training for swim coaches through ARC; or

(iii) Other training the department determines equivalent.

(d) Attendant shall maintain current certificates and meet the requirements in the following:

(i) Adult, single rescue CPR through ARC or the American Heart Association; and

(ii) Basic water safety with ARC; or

(iii) Other training the department determines equivalent; and

(iv) Be sixteen years of age or older.

(e) Water treatment operator shall have specific knowledge in provision of pool water chemistry, filtration, pump-

ing equipment, and rules and regulations pertaining to pool facilities;

(f) When pool facility is using chlorine gas, an operator shall have specific training as follows:

(i) Proper operation of the chlorination equipment and routine maintenance procedures;

(ii) Basic understanding of physical and chemical properties of chlorine gas under pressure;

(iii) Basic understanding on use of leak detection and emergency safety equipment;

(iv) Basic knowledge of proper first-aid procedures and response for accidental inhalation of chlorine gas;

(v) Six hours or more of formal instruction once every three years or three hours or more every eighteen months with certificate of training provided.

(g) Persons shall be exempt from having current CPR or standard first-aid certificates if the persons hold current certificates in any of the following:

(i) Community CPR in the place of adult, single rescue CPR;

(ii) In the place of standard first aid:

(A) Advanced first aid;

(B) First responder;

(C) Emergency medical technician; or

(D) Paramedic.

(iii) Other training the department recognizes as equivalent or exceeding current requirements.

(6) **Emergency response plan.** Owners shall ensure emergency response provisions as follows:

(a) In pool facilities where lifeguards, assistant lifeguards, or swim coaches are required:

(i) Sufficient qualified personnel, for example, lifeguards, assistant lifeguards, or swim coaches where appropriate, located to provide a response time not to exceed thirty seconds to all pool users;

(ii) Based on, but not limited to, the following:

(A) Pool depth;

(B) Line of sight;

(C) Bather load;

(D) Training procedures;

(E) Emergency procedures, and

(F) Lifeguard rotation.

(iii) Emergency response drills to meet the response time including:

(A) Drills two or more times each year;

(B) Testing documentation.

(iv) Where SCUBA or kayaking lessons are performed at the pool, personnel guarding these activities shall be provided special in-service training.

(b) In pool facilities where no lifeguards are provided:

(i) Posting and ongoing notification and enforcement of conditions for pool use. See subsection (3)(b) and (c) of this section;

(ii) Enforcement of conditions by owner and authorized personnel;

(iii) Emergency equipment specified under WAC 246-260-090(31), readily available during operating hours.

(c) Ongoing training and evaluation of the lifeguarding skills and/or assistant, coach, or attendant skills;

(d) In facilities where chlorine gas is used:

(i) Annual emergency drills;

(ii) Identification of the location of accessible chlorine cylinder repair kits.

(7) **Bather use.** Owners shall establish rules of conduct for facility users to ensure health and safety as follows:

(a) Signage noted under WAC 246-260-090(33);

(b) Facilities used for swimming instruction courses may allow diving into water depths recognized as adequate by the organization providing the certificates, for example ARC or YMCA, provided the divers are supervised by instructors.

(8) **Environmental conditions.** Owners shall monitor various environmental conditions affecting the facility or the user and take appropriate action in response to these factors, including electrical storms, fog, wind, visibility problems, etc.

(9) **Closure.** Owners shall close the facility when the facility or portion thereof presents an unhealthful, unsafe, or unsanitary condition. These conditions include lack of compliance with the water quality or operation requirements as detailed under WAC 246-260-070 and 246-260-100.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-100, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-060, filed 3/12/90, effective 4/12/90; Regulation .98.060, effective 3/11/60.]

WAC 246-260-110 Spa pool design, construction, and equipment. (1) **Location.** Owners shall locate pools to:

(a) Minimize pollution by dust, smoke, soot, and other undesirable substances;

(b) Eliminate pollution from surrounding surface drainage; and

(c) Ensure pump house, trees, and other structure locations are fifteen feet or more away from the pool or provide barriers or other means to prevent ready access from any such structure. Structures shall not be construed to include:

(i) Building walkways above the second story or roofs of any building structure; or

(ii) Any barriers provided to prevent unauthorized pool access, for example, fencing.

(2) **Materials.** Owners shall use only structure and equipment materials which are nontoxic, durable, inert, impervious to water, and easily cleanable.

(3) **Walking surfaces.** Owners shall design and maintain walking surfaces:

(a) Uniformly sloping away from the pool or pools with a minimum of one-fourth inch per foot and a maximum of one-half inch per foot;

(b) Of a nonslip finish not presenting a tripping hazard;

(c) Equipped with sufficient drains to prevent standing water;

(d) Of easily cleanable impervious finishes;

(e) Providing a minimum unobstructed six feet by seven feet area adjacent to the pool;

(f) Continuous and four feet wide or more extending around the entire pool if perimeter is equal to or greater than forty feet;

(g) Forty inches or less below horizontal ledge of elevated pool. Elevated pools over twelve inches above deck

level shall have a maximum ledge thickness of twelve inches, except in the area of stairs;

(h) Continuously extending, and four feet wide or more, around fifty percent or more of the pool, if the pool is over forty inches above the primary walkway; and

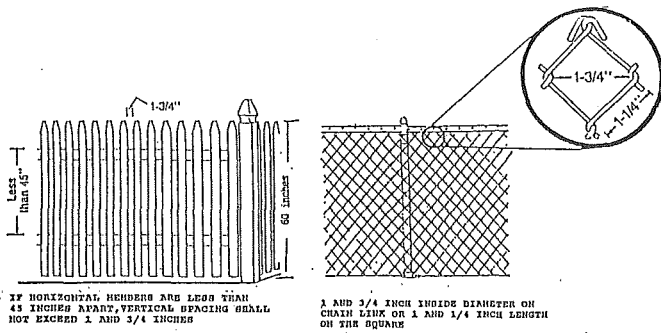
(i) In conformance with department-established guidelines for any resilient artificial surfaces.

(4) **Barriers.** Owners shall provide barrier protection to prevent unauthorized access.

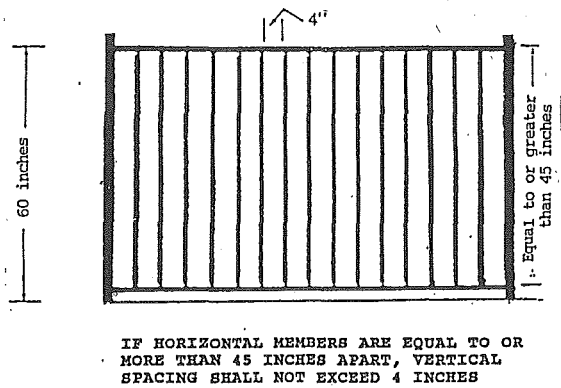
(a) A barrier shall be sixty inches or more in height and:

(i) Shall not allow passage of a four-inch diameter sphere;

(ii) If it has horizontal members that are spaced less than forty-five inches between the tops of the horizontal members, shall have spaces between the vertical members no greater than a width of one and three-quarter inches (see Figure 110.1); or



(iii) If it has horizontal members that are spaced at, or more than, forty-five inches between the tops of the horizontal members, shall have spaces between the vertical members no greater than a four-inch width (see Figure 110.2); and



(iv) Shall have lockable gates and entrances provided with a self-closing, self-latching mechanism fifty-four inches or more from the ground with a clear space fifty inches deep on the latch side of the door to position a wheelchair. When a latching mechanism is provided at any lower height, the latching mechanism shall be of a type remaining continuously locked, and only opening with the use of a key or other access control system.

(b) Restricted area service entrances shall be exempt from door or gate requirements providing no public access is available;

(c) Lifeguarded pools are not required to have a self-closing, self-latching gate during the period a pool is in use. Facility gates shall be closed and locked during nonuse periods; and

(d) An entrance to the pool area which shall not serve as a required exit from another part of a building when there is a conflict with other codes or regulations.

(5) **Spa pool structure.** Owners shall ensure general pool requirements include:

(a) Pool surfaces which are nontoxic, impervious, smooth, easily cleanable, and enduring. Pools one hundred square feet or more shall be a white or light color;

(b) A dimensional design providing for safety, circulation, and quality of the water including, but not be limited to:

(i) Surfaces not causing cutting, pinching, puncturing, entanglement, or an abrasion hazard under casual contact;

(ii) Construction tolerances conforming with current NSPI public spa standards;

(iii) Uniform floor slopes not exceeding one foot of drop in twelve feet of run sloped to drain;

(iv) A minimum height between the top of the pool rim and the ceiling shall be seven feet; and

(v) Maximum operational depth of four feet measured from the water line. Exceptions may be made for special purpose designed pools.

(c) Adequate means to routinely drain or otherwise remove water from the pool.

(6) **Spa pool appurtenances.** Owners shall ensure pools contain:

(a) Handholds around the pool perimeter two feet or more in depth. Handholds shall be four feet apart or less and consist of any one or a combination of the following:

(i) Coping, ledges, radius flanges, or decks along the immediate top edge of the pool or suitable slip-resisting handholds located twelve inches or less above the water line;

(ii) Ladders or steps; or

(iii) Secured rope or railing twelve inches or less above the water line.

(b) Stairs:

(i) Meeting the following construction requirements:

(A) Nonslip tread finishes;

(B) Contrasting color stair tread edges clearly visible to users;

(C) Handrails with the leading edge for stairs at pool entry/exit being neither eighteen inches or more beyond nor eight inches or more inside (horizontally) the vertical plane of the bottom riser;

(D) Less than or equal to twenty feet of any point within the spa measured at the wall at the point of entry;

(E) Riser treads with a minimum unobstructed, horizontal, ten-inch tread depth and a minimum two-hundred-forty-inch surface area;

(F) Riser heights on spa pools over forty feet in perimeter, uniform and seven and one-half inches or less, except the bottom riser may be less than uniform height; and

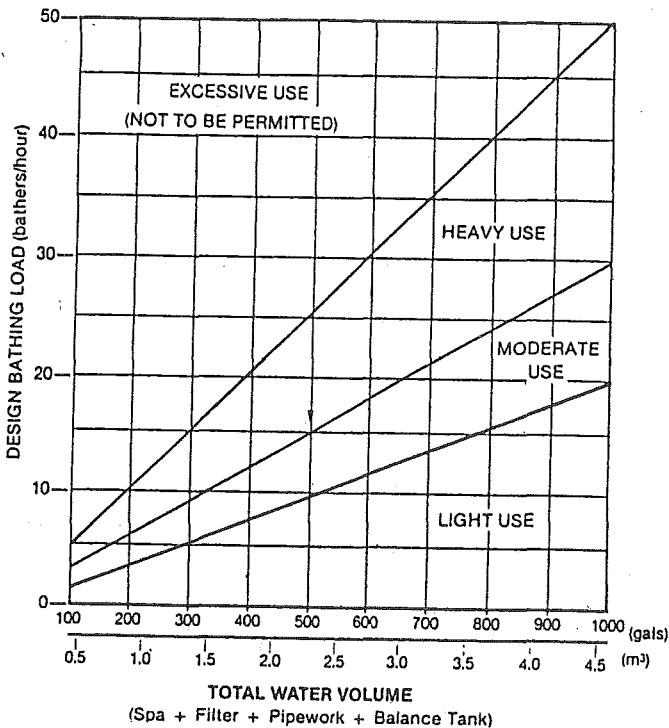
(G) Riser heights on spa pools of forty feet or less in perimeter, uniform and have a preferred seven and one-half inch height, but not greater than ten inches, except the bottom riser may be less than uniform height.

(7) **Spa pool bather design capacity and load.** Owners shall design and control the pool use to not exceed a maximum bather capacity and load as designated below:

(a) The maximum bather capacity is one person per four square feet. Maximum bather capacity is the maximum number of bathers at any one time; and

(b) Bather loads are designated in terms of three different loading conditions: Light, moderate, and heavy use as shown under Graph 040.1. Maximum bather load is the maximum number of bathers in a one-hour period. Interpret a single bather use to mean a bather using the pool for a fifteen minute duration. For pools with volumes greater than noted on the graph, loadings shall be based on the continued slope of the line above each use category.

GRAPH 110.3 SPA DESIGN FOR BATHER LOAD AND TURNOVER



(8) **Turnover.** Owners shall ensure pools turn over entire pool water volume at rates in accordance with designated bather load as determined from Graph 110.3 noted in subsection (7) of this section.

(a) Minimum turnover time for treatment recirculation shall be:

- (i) For light use pool facilities, thirty minutes;
- (ii) For moderate use pool facilities, twenty minutes;
- (iii) For heavy use pool facilities, ten minutes.

(b) Exceptions to recirculation requirements may be made for flow-through pools in the following conditions:

(i) Where water supply is sufficient to provide the same turnover period specified for recirculation pools;

(ii) The source water supply meets the quality requirements and is subject to a disinfection method outlined under WAC 246-260-070(3);

(iii) The introduction of fresh treated pool water is accomplished by the same type of inlet and outlet design required for recirculation pools; and

(iv) The pool water quality complies with WAC 246-260-070.

(9) **Inlets.** Owners shall provide pool inlets:

(a) Submerged and located to produce uniform water and chemical circulation throughout the pool;

(b) Located on the bottom of pools ten thousand gallons or more, unless otherwise justified by the design engineer to either the department's or local health officer's satisfaction.

(10) **Outlets.** Owners shall provide pool outlets with:

(a) Overflow and main drain grating systems each designed to carry one hundred percent of the total recirculation filter flow, and main drain piping designed to carry fifty percent or more of the total recirculation filter flow;

(b) Overflow outlets maintaining:

(i) A minimum of sixty percent of filter recirculation flow at all times; and

(ii) An overflow channel which may be used on any pool and required on pools ten thousand gallons or more on the pool perimeter to promote uniform circulation and skimming action of the upper water layer with:

(A) A design preventing all matter entering the channel from returning to the pool;

(B) Dimensions minimizing bather hazards, such as catching arms or feet;

(C) One one-hundredth of a foot slope per foot or more;

(D) Drains sufficiently spaced and sized to collect and remove overflow water to return line and filter, where applicable; and

(E) Size sufficient to prevent flooded suction conditions on the overflow system and to properly drain water away from the pool. Displacement shall be computed at twenty gallons per bather. Balancing tanks use is optional dependent on the overflow channel volume and design.

(iii) Skimmers in lieu of pool overflow channels up to ten thousand gallons if:

(A) Weir provided in skimmer has a maximum flow rate through skimmer not exceeding four gpm per inch of weir;

(B) Devices are recessed in the pool wall so no part protrudes beyond the plane of the wall into the pool;

(C) The skimmer is equipped with a device to prevent air lock in the recirculation suction line, such as, an equalizer line;

(D) The skimmer is equipped with a removable and cleanable screen designed to trap large solids;

(E) Automatically adjustable and operates freely with continuous skimming action to continue through all loading rates as the skimmer is designed. Displacement shall be computed at twenty gallons per bather.

(c) Main drains in all pools with:

(i) Location of one main drain or more at the lowest point of the pool floor, or means to readily drain the entire pool water readily available;

(ii) A minimum of two main drains with equivalent recirculation capacity and net surface open area; or on spa pools with fifteen hundred gallon volume or less, a large single main drain twelve inches square or more in surface area;

(iii) A design to aid in hair entrapment prevention when main drains are on vertical walls;

(iv) Total open area of grates sized to prevent a suction or entrapment hazard dangerous to user;

(v) Grates on drains with a:

(A) Maximum flow of one and one-half feet per second;

or

(B) Net outlet area four times or more the area of the discharge pipe;

(vi) Openings not allowing a sphere over one-half inch in diameter to pass;

(vii) Grates designed to withstand forces of users;

(viii) Grates removable only with specific tools; and

(ix) Means to control flow from recirculation pump or balancing tank.

(11) **Flow.** Owners shall maintain pool recirculation flow not to exceed:

(a) Six feet per second in the valved suction or discharge side of the pump; and

(b) Ten feet per second in open discharge pipes on the pressure side of the pump or filter discharge. The recirculation flow limit does not apply to the return inlet and the last two feet of pipe leading to the inlet.

(c) The recirculation piping of the spa pool shall not inter-mix back with any companion swimming pool water.

(12) **Pumps.** Owners shall have and maintain recirculation pumps with adequate capacity to:

(a) Provide design flows and pressure for water recirculation over the entire operating filter pressure;

(b) Allow proper backwashing of filters when specified;

(c) Have self-priming capability when installed above the pool water level; and

(d) Ensure the recirculation pump system shall have a separate water treatment pump than that used for hydrotherapy spa action, unless automatic flow control valving is provided to limit filter flow to required design.

(13) **Strainers.** Where pumps precede the filter, owners shall equip pool recirculation facilities with hair and lint strainers which shall:

(a) Be located upstream of recirculation pumps;

(b) Provide strainer screen sufficiently strong to prevent collapse when clogged;

(c) Have an operable cover; and

(d) Provide valving to isolate the strainer when located below pool water level.

(14) **Valves.** Owners shall provide valves at appropriate locations to allow equipment isolation and maintenance.

(15) **Equipment rooms.** Owners shall provide equipment rooms for a spa pool with:

(a) Ten thousand gallons or more in water volume or for spa pools provided adjacent to a swimming pool at the same facility with:

(i) Enclosed pumps, disinfection equipment, filters, and other electrical and mechanical feed equipment and associated chemicals. Storage of chemicals shall conform to manufacturer requirements;

(ii) Working space and access to perform routine operation;

(iii) A forty-six-square-foot minimum floor area and provides a three-foot minimum access area to service equipment;

(iv) One floor drain or more and a floor slope to the drain at a one-fourth-inch-per-foot minimum;

(v) If below grade, ready access;

(vi) Ventilation;

(vii) Twenty foot candles or more of light measured thirty inches from the floor; and

(viii) Kept locked.

(b) Less than ten thousand gallons in water volume or for spa pools not provided at the same facility as a swimming pool complying with subsection (15)(a)(i), (ii), (v), and (viii) of this section.

(16) **Make-up water.** Owners shall ensure a source of make-up water and associated piping at the pool:

(a) Providing sufficient quantity to replace daily pool water losses;

(b) Coming from a supply conforming with chapter 246-290 WAC;

(c) Preventing cross connections using a minimum air gap of two pipe diameters or approved backflow prevention devices between the make-up water source and the pool water or waste water; and

(d) If using a pool fill spout, not projecting greater than one inch into the space above the water surface area and shielded to not create a deck hazard.

(17) **Filters.** Owners shall equip pools with filtration equipment:

(a) Meeting the applicable NSF standards or equivalent;

(b) Using acceptable type and filter rates described under Table 040.2 of this section;

(c) Having pressure or vacuum gauges for measuring loss of head through the filter with a minimum of one gauge preceding and one gauge following the filter;

(d) Having a rate of flow indicator to measure a flow with accuracy, repeatability, and durability equivalent to flow meters meeting NSF standards; and

(e) Having means of discharging filter backwash to waste with:

(i) Discharge in a manner not creating a public nuisance;

(ii) Disposal in accordance with applicable local laws or regulations;

(iii) Minimum air gap of two pipe diameters to prevent cross-connection from waste discharge and recirculation system piping;

(iv) Discharge receptor and sufficient size piping to accept backwash water and to prevent flooding; and

(v) Ability to monitor filter effluent during backwash, that is, use of sight glass.

(f) Providing means to release air entering the filter tank on pressure filters;

(g) When cartridge filters are used:

(i) Provide with an extra set of cartridges; and

(ii) Have any bypass valves in a permanently closed position.

(h) When using pressure DE filters with separation tanks:

(i) Providing a means of air release or a lid providing a slow and safe release of pressure; and

(ii) Showing a readily visible user warning that the air release must be opened before starting the circulation pump.

TABLE 110.4

SPA POOL FILTER RATE APPLICATION RATES

Type of Filter Media	Rates in gpm/Square Feet		
	Minimum	Maximum	
Sand			
Rapid Sand or Pressure Sand	—	3	
High Rate Sand Pressure or Vacuum	10	15	
	Continuous Feed	Manual Feed	
D.E.			
Pressure	0.8	1.0	1.5
Vacuum	1.0	1.35	1.5
Cartridge*			.375

NOTE: * Cartridge filters shall have a nominal micron rating of twenty microns or less.

(18) **Disinfection equipment.** Owners shall provide disinfection equipment:

(a) Providing a continuous and effective disinfectant residual in the water;

(b) Using a disinfectant with an easily monitored residual;

(c) Having a design feed rate providing effective disinfection levels when the pool is in peak demand conditions;

(d) Having easily cleanable equipment and piping used to apply chemicals and with provisions to prevent undue clogging. All materials shall be resistant to action of chemicals used;

(e) Conforming to NSF standards if the disinfection equipment contains:

(i) Adjustable output rate chemical feed equipment for liquid solutions. The equipment shall:

(A) Feed under positive pressure in the recirculation system;

(B) Provide means for dosage adjustment;

(C) Have provisions to prevent hypochlorite solution siphoning when equipment is turned off. This applies when the disinfection equipment is above pool water level.

(ii) Flow through chemical feed for solid feed materials. Solid tablets or granules shall not be placed in skimmer baskets accessible to the public.

(f) Allowing hand feeding on an emergency basis only;

(g) Meeting the following conditions when using chlorine gas:

(i) Chlorine rooms shall:

(A) Be above ground level;

(B) Be constructed so all openings or partitions with adjoining rooms are sealed;

(C) Be located with consideration of prevailing winds to dissipate leaked chlorine away from the pool facility;

(D) Have door opening outward only and to the out-of-doors; and

(E) Provide a sign on the door exterior reading DANGER CHLORINE. The sign shall be large enough to be read twenty-five feet away.

(ii) Chlorine rooms shall have mechanical exhausting ventilation including:

(A) Air inlet located as far as possible from fan intake to promote good air circulation patterns;

(B) Minimum of one air change per minute in the chlorine room when fan is operating;

(C) A remote switch outside the room or a door-activated switch to turn on fan before entering;

(D) Suction for fan near the floor;

(E) Exhaust for fan and chlorinator vent located to prevent contaminating air intake and prevent undue hazard for pool facility users; and

(F) Screened chlorinator vent.

(iii) Gas chlorine systems shall:

(A) Be vacuum injection type, with vacuum actuated cylinder regulators;

(B) Provide integral backflow and anti-siphon protection at the injector;

(C) Provide taring (net weight of cylinder gas) scales to determine chlorine weight.

(iv) Breathing protection available in an accessible area for the operator outside of the chlorine room including:

(A) Self-contained breathing apparatus designed for use in a chlorine atmosphere for working with chlorine leaks and maintained in accordance with department of labor and industries standards; or

(B) Provisions to substitute breathing protection at the site, if procedures can be established and documented with emergency service fire districts or other approved organization within the area for promptly responding to chlorine leaks.

(v) Means for automatic shutoff when pool flow is interrupted;

(vi) Chlorine gas cylinders shall:

(A) Be stored only in chlorine rooms;

(B) Have approved valve-stem cylinder wrench on the valve stem to shut the system down in an emergency event;

(C) Be properly secured to prevent tipping;

(D) Be tagged to indicate cylinders are empty or full; and

(E) Not exceed one hundred fifty pounds tare weight per cylinder. If one-ton cylinder use is desired, an engineer specializing in chlorine design shall prepare a design proposal for department consideration.

(19) **Chemical feeding equipment for pH control.** Owners applying chemicals for controlling pH through chemical feed equipment shall provide equipment with:

(a) Adequate size and design to allow routine cleaning and maintenance;

(b) Materials resistant to chemical action;

(c) Means for automatic shut off when pool flow is interrupted;

(d) Chemical feed equipment for pH control on pools ten thousand gallons or greater;

(e) Any pool feeding with:

(i) Caustic soda (NaOH);

(ii) Carbon dioxide (CO₂); or

(iii) Other chemicals the department determines necessary to require metered and controlled feeding.

(20) **Heaters.** Where pool heating equipment is provided, owners shall:

(a) Locate equipment so any standing pilot is readily accessible;

(b) Install equipment per NEC and UMC.

(21) **Ventilation.** Owners shall provide indoor pool facility ventilation conforming with ASHRAE pool facility standards.

(22) **Testing equipment.** Owners shall use testing equipment as noted in the water quality section under WAC 246-260-070(6).

(23) **Chemical storage.** Owners shall ensure chemical storage design and placement minimizes safety risks.

(24) **Restroom and plumbing fixtures.** Owners shall provide restrooms and plumbing facilities at pools as follows:

(a) In the spa pool facilities provided in conjunction with general use and limited use swimming pools, wading pools, or other water recreation facilities, the spa pool bathing load shall be added to the total load for consideration of plumbing fixture units;

(b) If a spa pool is the sole water recreation facility at a site, plumbing fixtures, as noted under Table 110.5, including:

- (i) Flush toilets and toilet tissue in dispensers;
- (ii) Shower facilities that:

(A) Deliver water at a temperature range of ninety to one hundred ten degrees Fahrenheit; and

(B) Provide single service soap in nonglass dispensers.

(iii) Sinks provided with:

(A) Tempered or hot and cold running water;

(B) Single service soap in nonglass dispensers; and

(C) Single service towels or electric hand dryer.

(iv) Hose bibs with vacuum breakers conveniently accessible to pool and within one hundred feet; and

(v) Sewage disposed in a manner approved by the department or local health officer.

(c) If owners limit the number of people within their facility to a certain number and post maximum occupancy loading, the number of plumbing fixtures may be based on the maximum occupancy.

TABLE 110.5
PLUMBING FIXTURE MINIMUM REQUIREMENTS FOR SOLE FACILITY SPA POOLS

Spa Pools With	Minimum Number of Fixture Units				
	Toilet	Shower	Sink	Dress- ing Room	Hose Bib
1. Limited spa use with living units* within 100 feet and less than 3 stories	-	-	-	-	1
2. Limited spa use with living units > 100 ft. and < 500 ft. and < three stories**	1	-	1	-	1
3. Limited spa use with living units > 500 ft. and < 1/4 mi. and/or > three stories**	1(M) 1(F)	1(M) 1(F)	1(M) 1(F)	- -	1 -
4. Limited spa use with living units > 1/4 mile or general use spa pool***	1(M) 1(F)	1(M) 1(F)	1(M) 1(F)	1(M) 1(F)	1 -

NOTE: * "Living unit" means all the units the facility serves.
 ** Consideration for elevators adjacent to pool may allow variance from this requirement.
 *** When bathing load exceeds 40 of either sex, the fixture units provided shall conform to general use requirements for swimming pools.

(25) **Lighting.** Owners shall design and maintain pool facility lighting to:

(a) Illuminate indoor facilities, outdoor facilities used after dusk, and locker room facilities with a minimum lighting intensity maintained thirty inches above any walking surface, pool deck, or pool area of:

- (i) Thirty foot candles at indoor facilities;
- (ii) Fifteen foot candles at outdoor facilities; and
- (iii) Twenty foot candles in locker rooms.

(b) Allow lifeguards or attendants to clearly see pool areas and walking surfaces;

(c) Meet any additional lighting requirements deemed necessary by the department or local health officer;

(d) Provide protective shielding for all lighting fixtures above walking surfaces and pool areas; and

(e) Provide all indoor facilities with one or more pool-area emergency lights designed to turn on in the event of a power failure. The emergency lighting shall conform to requirements of UL standard 924.

(26) **Emergency equipment.** Owners shall provide first aid and emergency equipment readily available during operating hours as follows:

(a) Spa pool facilities ten thousand gallons or more or used in conjunction with a general use swimming pool:

(i) A telephone within the facility with a prominently displayed list of emergency medical service response numbers;

(ii) Sufficient and suitable area provided to accommodate persons within the facility requiring first aid treatment and necessary first aid equipment;

(iii) A standard sixteen unit first aid kit;

(iv) Two or more blankets reserved for emergency use;

(v) A clearly marked emergency shut off switch for shutting off all pumps, accessible to the public within twenty feet of the pool. Spa pool facilities shall also provide an audible alarm with the emergency shut off switch; and

(vi) Heater thermostat switches shall be inaccessible to bathers.

(b) Spa facilities containing less than ten thousand gallons:

(i) During the period the facility is open for use, one of the following is required:

(A) Telephone within one minute access;

(B) Alternate means of reaching emergency medical service response numbers; or

(C) Provision of an audible emergency alarm to alert others at the area of need to respond.

(ii) Comply with subsections (26)(a)(iii), (iv), (v), and (vi) of this section.

(27) **Signs.** Owners shall provide signs at pools which must convey the following conditions, but may be conveyed by any combination of words, pictures, or symbols:

(a) Prohibition of running or horseplay;

(b) Prohibition of use by persons with communicable diseases;

(c) Prohibition of use by persons under the influence of alcohol or drugs;

(d) Requirement for a cleansing shower before pool entry;

(e) Caution that persons suffering from heart disease, diabetes, or high blood pressure should consult a physician before spa pool use;

(f) Caution for women who are or may be pregnant to seek the advice of a physician regarding spa use and to limit the women's time in the pool;

(g) Persons should limit the stay in the pool to fifteen minutes at any one session;

(h) All children twelve years of age or under shall be accompanied by a responsible adult observer. No child six years of age or under should use the pool;

(i) No person seventeen years of age or under shall use the pool alone;

(j) Maximum bathing capacity of pool shall be posted;

(k) Prohibition of food or drink in the pool water;

(l) In pools where lifeguards or attendants are not present, post requirements for facility use as described under WAC 246-260-120(3); and

(m) Location of the nearest telephone or emergency notification procedure.

(28) **Food service.** When owners allow or make provisions for food service:

(a) At general use pool facilities, ensure food and beverage sale and consumption areas are separated from pool and deck. Special provisions may allow food and beverage service on the walkway provided a minimum six feet clear area is maintained between the pool and any tables or chairs provided for food service for special facility functions;

(b) At limited use spa pool facilities, prohibit food and beverage in the pool water and maintain a minimum four foot clear area between pool edge and any tables and chairs provided for food service;

(c) At general use pool facilities, prohibit alcoholic beverages;

(d) At limited use pool facilities, when alcohol is sold within the pool facility, provide an attendant at the pool area;

(e) Provide trash containers; and

(f) Prohibit glass containers in the pool facilities.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-110, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-040, filed 3/12/90, effective 4/12/90; Regulation .98.040, effective 3/11/60.]

WAC 246-260-120 Operation of spa pool facilities.

(1) **Operation plan.** Owners shall ensure proper operation to protect the public health, safety, and water quality by establishing practices and developing an operations manual addressing each of the following:

(a) Physical pool facility components;

(b) Personnel;

(c) Users and spectators; and

(d) Environmental conditions.

(2) **Physical components.** Owners shall provide routine checks of the physical components:

(a) Ensuring all structural facilities which the users come in contact are intact and free from undue wear or fatigue and replaced as needed;

(b) Eliminating adverse affects of water ponding on walking surfaces;

(c) Ensuring preventive maintenance on equipment essential for protection of the public health, safety, and water quality;

(d) Ensuring any necessary emergency equipment is available and in good repair;

(e) Having means for routine oxidation of spa pool water provided after heavy use, for example, super chlorination;

(f) Maintaining barrier protection;

(g) Ensuring common articles such as towels, bathing suits, bathing caps, etc., for patron use shall be sanitized before re-use if provided for patrons; and

(h) Ensuring a continuous twenty-four-hour-a-day treatment and turnover during periods of use not exceeding:

(i) Thirty minutes in lightly loaded spas; or

(ii) Twenty minutes in moderately loaded spas; or

(iii) Ten minutes in heavily loaded spas.

(iv) Turnover rates designated in subsection (2) of this section, except allowance shall be made for minor equipment maintenance and existing pools with turnover rates varying from this section may continue to operate if water quality conditions conform with WAC 246-260-070.

(3) **Required personnel.** Owners shall ensure appropriate personnel at pool facilities as follows:

(a) A lifeguard or attendant. If no lifeguard or attendant is present, pool facility use shall be subject to the following conditions:

(i) When pool is used by children twelve years of age or under, a responsible adult eighteen years of age or older shall accompany the children and be at the pool or the pool deck at all times the children use the facility;

(ii) When used by persons seventeen years of age or under, a minimum of two people at the pool facility at all times the pool is in use;

(iii) At general use pools, subdivision (a)(i) and (ii) of this subsection be posted; and

(iv) At limited use pools, subdivision (a)(i) and (ii) of this subsection be posted and ongoing provisions notifying the responsible person of the conditions.

(b) A water treatment operator.

(4) **Personnel duties and equipment.** Owners shall ensure the specific duties and equipment of designated personnel include:

(a) Lifeguards, during periods of lifeguarding, guard users of the pool facility in areas assigned;

(b) Assistant lifeguards when provided at the pool used under the following conditions:

(i) Assistant lifeguard limited to guarding responsibility of areas four feet or less in depth; and

(ii) A lifeguard overseeing the activities of the assistant lifeguard;

(c) Attendants, when provided, at pools not requiring lifeguards oversee use of the pool by bathers and provide supervision and elementary rescues such as reaching assists to bathers in need;

(d) Water treatment operator oversees that the water treatment components are adequately functioning to protect public health, safety, and water quality;

(e) Notification of responsible persons on the conditions for facility use at pool facilities not requiring lifeguards, and where no lifeguards or attendants are present. A responsible

person means a person having responsibility for overseeing users seventeen years of age or under, including but not limited to a person:

- (i) Renting an apartment, hotel, motel, RV camp site; or
- (ii) Who is an owner or member of a condominium, home owner's association, mobile home park, or private club with a pool facility.
- (f) Lifeguards, assistant lifeguards, or attendants:
 - (i) Wear distinguishing suit, uniform, or emblem; and
 - (ii) Equipped with a whistle or a signaling device.
- (5) **Personnel training.** Owners shall require training for each type of personnel including:
 - (a) Lifeguards shall maintain current certificates in the following:
 - (i) Standard first aid and adult, single rescue CPR through ARC or American Heart Association; and
 - (ii) Advanced lifesaving, advanced lifesaving review, or lifeguard training through ARC; or
 - (iii) YMCA lifeguarding or crossover course through the YMCA; or
 - (iv) Lifeguard through the National Lifeguard Service, Canada; or
 - (v) Lifeguard through the National Pool and Waterpark Lifeguard Training; or
 - (vi) Basic lifeguard through advanced lifeguard training international; or
 - (vii) Other training the department determines equivalent; and
 - (viii) Thirty-six months after enactment of personnel training provisions of this chapter, the department shall no longer recognize training for lifeguards in advanced lifesaving or advanced lifesaving review through the ARC.
 - (b) Assistant lifeguards shall maintain current certificates and meet the requirements in the following:
 - (i) Adult, single rescue CPR through ARC or American Heart Association; and
 - (ii) Emergency water safety with ARC; or
 - (iii) Bronze medallion award through the Royal Lifesaving Society of Canada; or
 - (iv) Shallow water lifeguard through the National Pool and Waterpark Lifeguard Training; or
 - (v) Other training the department determines equivalent; and
 - (vi) Be fourteen years of age or older.
 - (c) Attendant shall maintain current certificates and meet the requirements in the following:
 - (i) Adult, single rescue CPR through ARC or American Heart Association; and
 - (ii) Basic water safety with ARC; or
 - (iii) Lifesaver with YMCA; or
 - (iv) Bronze medallion award through the Royal Lifesaving Society of Canada; or
 - (v) Other training the department determines equivalent; and
 - (vi) Be sixteen years of age or older.
 - (d) Water treatment operator shall have specific knowledge in the provision of pool water chemistry, filtration, pumping equipment, and rules and regulations pertaining to pool facilities;

- (e) When the pool facility is using chlorine gas, an operator shall have specific training as follows:
 - (i) Proper operation of the chlorination equipment and routine maintenance procedures;
 - (ii) Basic understanding of physical and chemical properties of chlorine gas under pressure;
 - (iii) Basic understanding on use of leak detection and emergency safety equipment;
 - (iv) Basic knowledge of proper first aid procedures and response for accidental chlorine gas inhalation; and
 - (v) Six hours or more of formal instruction once every three years or three hours or more every eighteen months with certificate of training provided.
- (f) Persons shall be exempt from having a current CPR or standard first aid certificate if the person holds a current certificate in any of the following:
 - (i) Community CPR, in place of adult, single rescue CPR;
 - (ii) In place of standard first aid:
 - (A) Advanced first aid;
 - (B) First responder;
 - (C) Emergency medical technician; or
 - (D) Paramedic.
 - (iii) Other training the department recognizes as equivalent or exceeding current requirements.
- (6) **Emergency response plan.** Owners shall ensure emergency response provisions as follows:
 - (a) In pool facilities where lifeguards or assistant lifeguards are provided:
 - (i) Lifeguard, or assistant lifeguard where provided, is located to provide a response time not to exceed thirty seconds to all pool users;
 - (ii) Based on, but not limited to, the following:
 - (A) Pool depth;
 - (B) Line of sight;
 - (C) Bather load;
 - (D) Training procedures;
 - (E) Emergency procedures; and
 - (F) Lifeguard rotation.
 - (iii) Emergency response drills to meet the response time including:
 - (A) Drills two or more times each year;
 - (B) Testing documentation.
 - (b) In pool facilities where no lifeguard or assistant is provided:
 - (i) Posting and ongoing notification and enforcement of conditions of pool use described under subsection (3) of this section;
 - (ii) Enforcement of conditions by owner and authorized personnel;
 - (iii) Emergency equipment specified under WAC 246-260-110(26) readily available during operating hours.
 - (c) In pool facilities where chlorine gas is used:
 - (i) Annual emergency drills; and
 - (ii) Identification of the location of accessible chlorine cylinder repair kits.
- (7) **Bather use.** Owners shall establish rules of conduct for facility users to ensure health and safety. The rules shall include signage noted under WAC 246-260-110(27) of this chapter.

(8) **Environmental conditions.** Owners shall monitor various environmental conditions affecting the facility or the user and take appropriate action in response to these factors, including electrical storms, fog, wind, visibility problems, etc.

(9) **Closure.** Owners shall close the facility when the facility or portion thereof presents an unhealthful, unsafe, or unsanitary condition. These conditions would include lack of compliance with the water quality or operation requirements as detailed under WAC 246-260-070 and 246-260-120.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-120, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-045, filed 3/12/90, effective 4/12/90.]

WAC 246-260-130 Wading pool design, construction, and equipment. (1) **Location.** Owners shall locate pools to:

(a) Minimize pollution by dust, smoke, soot, and other undesirable substances;

(b) Eliminate pollution from surrounding surface drainage; and

(c) Ensure pump house, trees, and other structures are located fifteen feet or more from the pool or provide barriers or other means to prevent ready access from the structures. Structure shall not be construed to include:

(i) Building walkways above the second story or roofs of any building structure; or

(ii) Any barriers provided to prevent unauthorized pool access, for example, fencing.

(2) **Materials.** Owners shall use only structure and equipment materials which are nontoxic, durable, inert, impervious to water, and easily cleanable.

(3) **Walking surfaces.** Owners shall design and maintain pool walking surfaces:

(a) Uniformly sloping away from the pool or pools a minimum of one-fourth inch per foot and a maximum of one-half inch per foot;

(b) Of a nonslip finish not presenting a tripping hazard;

(c) Equipped with sufficient drains to prevent standing water;

(d) Of easily cleanable, impervious finishes;

(e) Four feet or more in width;

(f) At facilities with swimming pools fifteen hundred square feet or more associated with the wading pool, provide a minimum of sixteen square feet per bather; and

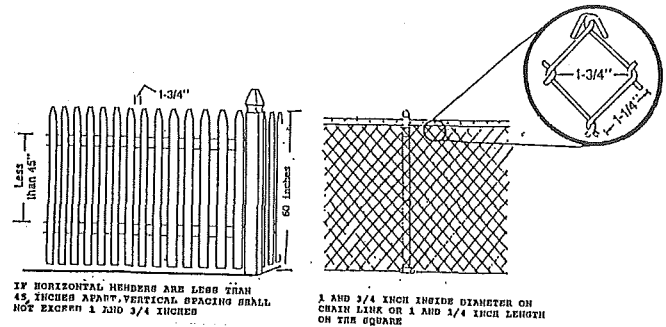
(g) In conformance with department-established guidelines for any resilient artificial surface.

(4) **Barriers.** Owners shall provide barrier protection to prevent unauthorized access.

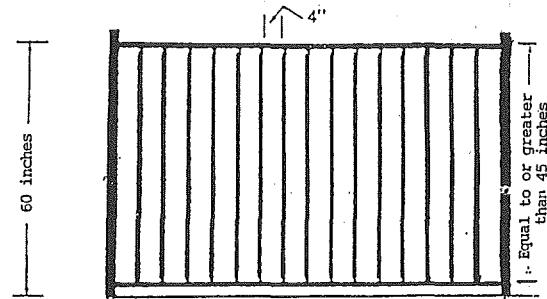
(a) A barrier shall be sixty inches or more in height and:

(i) Shall not allow passage of a four-inch diameter sphere;

(ii) If it has horizontal members that are spaced less than forty-five inches between the tops of the horizontal members, shall have spaces between the vertical members no greater than a width of one and three-quarter inches (see Figure 130.1); or



(iii) If it has horizontal members that are spaced at, or more than, forty-five inches between the tops of the horizontal members, shall have spaces between the vertical members no greater than a four-inch width (see Figure 130.2); and



(iv) Shall have lockable gates and entrances provided with a self-closing, self-latching mechanism fifty-four inches or more from the ground with a clear space fifty inches deep on the latch side of the door to position a wheelchair. When a latching mechanism is provided at any lower height, the latching mechanism shall be of a type remaining continuously locked, and only opening with the use of a key or other access control system.

(b) Restricted area service entrances shall be exempt from door or gate requirements providing no public access is available;

(c) Lifeguarded pools are not required to have a self-closing, self-latching gate during the period a pool is in use. Facility gates shall be closed and locked during nonuse periods; and

(d) An entrance to the pool area which shall not serve as a required exit from another part of a building when there is a conflict with other codes or regulations.

(5) **Pool surfaces.** Owners shall ensure pool surfaces with:

(a) Materials complying with subsection (2) of this section;

(b) Watertight and nonabrasive construction;

(c) White or light color finish not obscuring the view of objects or surfaces;

(d) Surfaces not causing cutting, pinching, puncturing, entanglement, or abrasion hazard under casual contact; and

(e) Construction tolerances conforming with current NSPI public pool standards.

(6) **Wading pool floor and wall dimensional design.** Owners shall ensure pool dimensional designs for floors and

walls provide for safety, circulation, and water quality including, but not limited to:

(a) All corners formed by intersection of walls with floor shall be covered;

(b) Uniform pool floor slopes not exceeding one foot of drop in twelve feet of run.

(7) **Wading pool entry and exit.** Owners shall provide means of entry and exit on all pools including one of the following:

(a) Stairs when provided meeting the following construction requirements:

(i) Nonslip tread finish;

(ii) Contrasting color stair tread edges clearly visible to users;

(iii) Handrails with the leading edge for stairs at entry/exit being neither eighteen inches or more beyond nor eight inches or more inside (horizontally) the vertical plane of the bottom riser;

(iv) Riser treads with a minimum unobstructed, horizontal, ten-inch tread depth and minimum two-hundred-forty-inch surface area;

(v) Riser height uniform and seven and one-half inches or less, except last step leading into pool may be less than uniform height.

(b) Shallow pool entry seven and one-half inches or less in depth;

(c) Ramp entry into the pool meeting the following construction requirements:

(i) Handrail extending over the deck edge and extending to the bottom of the ramp for entering and leaving the wading pool;

(ii) Ramp edges protruding into the pool of contrasting color;

(iii) Ramp slope not to exceed one foot in seven feet.

(d) Designs permitting entry and exit for impaired or handicapped persons are encouraged.

(8) **Turnover.** Owners shall ensure pools turn over entire pool water volume in three hours or less and:

(a) Where wading pools are recirculated jointly with swimming pools, means to ensure efficient turnover and treatment are maintained;

(b) Exceptions to recirculation requirements may be made for flow-through pools in the following conditions:

(i) Where water supply is sufficient to provide the same turnover period specified for recirculation pools;

(ii) The water supply source meets the quality requirements and is subject to a disinfection method as outlined under WAC 246-260-070(3);

(iii) The introduction of fresh treated pool water is accomplished by the same type of inlet and outlet design required for recirculation pools; and

(iv) The pool water quality complies with WAC 246-260-070.

(9) **Pool depth markings.** Owners shall provide depth markings:

(a) Plainly marking the water depth in feet on the horizontal surface of the coping or deck edge;

(b) Located on the coping or deck within eighteen inches of the water edge and positioned to be read while standing on the deck facing the water;

(c) Which are slip resistant;

(d) Placed at the maximum and minimum water depths;

(e) Spaced at intervals not exceeding twenty-five feet;

(f) Uniformly arranged on both sides and ends of the pool; and

(g) With a four-inch minimum height.

(10) **Bather load.** Owners shall ensure maximum number of bathers permitted in the wading pool facility at any one time not exceed one bather per seven square feet.

(11) **Inlets.** Owners shall provide pool inlets:

(a) Submerged and located to produce uniform water and chemical circulation throughout the pool; and

(b) Located on the bottom of pools twenty-five hundred square feet or more, unless otherwise justified by the design engineer to the department's or local health officer's satisfaction.

(12) **Outlets.** Owners shall provide pool outlets with:

(a) Overflow and main drain grating systems each designed to carry one hundred percent of the total recirculation filter flow and main drain piping designed to carry fifty percent or more of total recirculation filter flow;

(b) Overflow outlets that maintain:

(i) A minimum of sixty percent of filter recirculation flow at all times; and

(ii) An overflow channel which may be used on any pool and required on pools twenty-five hundred square feet or more on the pool perimeter to promote uniform circulation and skimming action of the upper water layer with:

(A) A design preventing all matter entering the channel from returning to the pool;

(B) Dimensions minimizing the hazard for bathers, such as catching arms or feet;

(C) One one-hundredth of a foot slope per foot or more;

(D) Drains sufficiently spaced and sized to collect and remove overflow water to return line and filter, where applicable; and

(E) Size sufficient to carry one hundred percent of the recirculation flow plus the surge flow equivalent to one-fifth of the balancing tank expressed in gallons per minute.

(iii) Skimmers in lieu of pool overflow channels up to twenty-five hundred square feet if:

(A) Weir provided in skimmer has a maximum flow rate through skimmer not exceeding four gpm per inch of weir;

(B) Devices are recessed in the pool wall so no part protrudes beyond the plane of the wall into the pool;

(C) The skimmer is equipped with a device to prevent air lock in the recirculation suction line, such as, an equalizer line;

(D) The skimmer is equipped with a removable and cleanable screen designed to trap large solids;

(E) Automatically adjustable and operates freely through all designed loading rates. Displacement shall be computed at ten gallons per bather.

(c) Main drains in all pools with:

(i) Location at the pool's low points;

(ii) A minimum of two main drains spaced:

(A) Twenty feet or less apart nor closer than six feet; or

(B) As far as possible from each other in pools seven feet or less linear floor distance.

(iii) Total open area of grates sized to prevent a suction or entrapment hazard dangerous to user;

(iv) Grates on drains with:

(A) Maximum flow of one and one-half feet per second;

or

(B) Net outlet area four times or more the area of the discharge pipe.

(v) Openings not allowing a sphere over one-half inch in diameter to pass;

(vi) Grates designed to withstand forces of users;

(vii) Grates removable only with specific tool; and

(viii) Means to control flow from recirculation pump or balancing tank.

(13) **Flow.** Owners shall maintain pool recirculation flow not to exceed:

(a) Six feet per second in valved suction or discharge side of the pump; and

(b) Ten feet per second in open discharge pipes on the pressure side of the pump or filter discharge. The recirculation flow limit does not apply to the return inlet and the last two feet of pipe leading to the inlet.

(14) **Balancing tanks.** Owners with overflow channels requiring balancing tanks shall:

(a) Maintain volume equivalent to seven times maximum bathing load expressed in gallons; and

(b) Increase capacity as necessary to provide volume for make-up water and to prevent air lock in the pump suction line.

(15) **Pumps.** Owners shall have and maintain wading pool recirculation pumps with adequate capacity to:

(a) Provide design flows and pressure for water recirculation over the entire operating filter pressure;

(b) Allow proper back washing of filters when specified; and

(c) Have self-priming capability when installed above pool water level.

(16) **Strainers.** Where pumps precede the filter, owners shall equip pool recirculation facilities with hair and lint strainers which shall:

(a) Be located upstream of recirculation pumps;

(b) Provide strainer screen sufficiently strong to prevent collapse when clogged;

(c) Have an openable cover; and

(d) Provide valving to isolate the strainer when located below pool water level.

(17) **Valves.** Owners shall provide valves at appropriate locations to allow isolation and maintenance of equipment.

(18) **Equipment rooms.** Owners shall provide equipment rooms:

(a) Enclosing pumps, disinfection equipment, filters and other electrical and mechanical feed equipment and associated chemicals. Chemical storage shall conform to manufacturer requirements;

(b) Providing work space and access to perform routine operations;

(c) With a forty-six-square-foot minimum floor area and provide a three-foot minimum of access area to service equipment;

(d) With one floor drain or more and a floor slope to the drain at a one-fourth-inch-per-foot minimum;

(e) Ready access if below grade;

(f) Ventilation;

(g) Twenty foot-candles or more of light measured thirty inches from the floor; and

(h) Kept locked.

(19) **Make-up water.** Owners shall ensure a source of make-up water and associated piping at the pool:

(a) Providing sufficient quantity to replace daily pool losses;

(b) Coming from a supply conforming with chapter 246-290 WAC;

(c) Preventing cross connections using a minimum air gap of two pipe diameters or approved backflow prevention devices between the make-up water source and the pool water or waste water; and

(d) If using a pool fill spout, not projecting greater than one inch into the space above the water surface area and shielded to not create a deck hazard.

(20) **Filters.** Owners shall equip pools with filtration equipment:

(a) Meeting the applicable standards of NSF or equivalent;

(b) Using acceptable type and filter rates described under Table 080.1 of this section;

(c) Having pressure or vacuum gauges for measuring loss of head through the filter with a minimum of one gauge preceding and one gauge following the filter;

(d) Having a rate of flow indicator to measure flow which has accuracy, repeatability, and durability equivalent to flow meters meeting NSF standards; and

(e) Having a means of discharging filter backwash to waste with:

(i) Discharge in a manner not creating a public nuisance;

(ii) Disposal in accordance with applicable local laws or regulations;

(iii) Minimum air gap of two pipe diameters to prevent cross-connection from waste discharge and recirculation system piping;

(iv) Discharge receptor and piping of sufficient size to accept backwash water and prevent flooding; and

(v) Ability to monitor filter effluent during backwash, that is, use of a sight glass.

(f) Providing means to release air entering the filter tank on pressure filters;

(g) When cartridge filters are used:

(i) Provide with an extra set of cartridges; and

(ii) Have any bypass valves in a permanently closed position.

(h) When using pressure DE filters with separation tanks:

(i) Provide means of air release or a lid providing a slow and safe release of pressure; and

(ii) Show a readily visible user warning that the air release must be opened before starting the circulation pump.

TABLE 130.3

TYPE AND RANGES OF FILTERS FOR WADING POOLS

Range of Acceptable Filter Rate Type of Filter Media	Expressed in gpm/Square Feet		
	Minimum	Maximum	
Sand			
Rapid Sand or Pressure Sand Wading Pools less than 10,000 gallons	—	3	
High Rate Sand Pressure or Vacuum Wading Pools greater than 10,000 gallons	10	15	
High Rate Sand Pressure* or Vacuum	10	18	
	Continuous Feed	Manual Feed	
D.E.			
Pressure	1.0	1.35	2.0
Vacuum	0.8	1.0	2.0
Cartridge**			0.375

NOTE: * Filters sized at maximum application rate shall be equipped with flow control valves to maintain flow equilibrium to account for varying filter pressures and consequent flow production.

** Cartridge filters shall have a nominal micron rating of twenty microns or less.

(21) **Disinfection equipment.** Owners shall provide disinfection equipment:

(a) Providing a continuous and effective disinfectant residual in the water;

(b) Using a disinfectant with an easily monitored residual;

(c) Having a design feed rate providing effective disinfection levels when the pool is in peak demand conditions;

(d) Having easily cleanable equipment and piping used to apply chemicals and with provisions to prevent undue clogging. All materials shall be resistant to action of chemicals used;

(e) Conforming to NSF standards if the disinfection equipment has:

(i) Adjustable output rate chemical feed equipment for liquid solutions. When using this equipment, it shall:

(A) Feed under positive pressure in the recirculation system;

(B) Provide means for dosage adjustment;

(C) Have provisions to prevent hypochlorite solution siphoning when equipment is turned off, this applies when the disinfection equipment is above pool water level.

(ii) Flow through chemical feed for solid feed material. Solid tablets or granules shall not be placed in skimmer baskets accessible to the public.

(f) Allowing hand feeding on an emergency basis only;

(g) Meeting the following conditions when using chlorine gas:

(i) Chlorine rooms shall:

(A) Be above ground level;

(B) Be constructed so all openings or partitions with adjoining rooms are sealed;

(C) Be located with consideration of prevailing winds to dissipate leaked chlorine away from the pool facility;

(D) Have door opening outward only and to the out-of-doors;

(E) Provide a sign on the door exterior reading danger chlorine. The sign shall be large enough to be read twenty-five feet away.

(ii) Chlorine rooms shall have mechanical exhausting ventilation including:

(A) Air inlet located as far as possible from fan intake to promote good air circulation patterns;

(B) Minimum of one air change per minute in the chlorine room when fan is operating;

(C) A remote switch outside the room or a door-activated switch to turn on fan before entering;

(D) Suction for fan near the floor;

(E) Exhaust for fan and chlorinator vent located to prevent contaminating air intake and prevent undue hazard for the pool facility users; and

(F) Screened chlorinator vent.

(iii) Gas chlorine systems shall:

(A) Be vacuum injection type, with vacuum-actuated cylinder regulators;

(B) Provide integral backflow and anti-siphon protection at the injector; and

(C) Provide taring (net weight of cylinder gas) scales for determining chlorine weight.

(iv) Breathing protection available in an accessible area for the operator outside of the chlorine room including:

(A) Self-contained breathing apparatus designed for use in a chlorine atmosphere for working with chlorine leaks and maintained in accordance with department of labor and industries standards; or

(B) Provisions to substitute breathing protection at the site, if procedures can be established and documented with emergency service fire districts or other approved organization within the area for promptly responding to chlorine leaks.

(v) Means for automatic shutoff when pool flow is interrupted; and

(vi) Chlorine gas cylinders shall:

(A) Be stored only in chlorine rooms;

(B) Have approved valve-stem cylinder wrench on the valve stem to shut the system down in an emergency event;

(C) Be properly secured to prevent tipping;

(D) Be tagged to indicate cylinders are empty or full; and

(E) Not exceed one hundred fifty pounds tare weight per cylinder. If one-ton cylinder use is desired, an engineer specializing in chlorine design shall prepare a design proposal for department consideration.

(22) **Chemical feeding equipment for pH control.** Owners applying chemicals for controlling pH through chemical feed equipment shall provide equipment with:

(a) Adequate size and design to allow routine cleaning and maintenance;

(b) Materials resistant to chemical action;

(c) Means for automatic shut off when pool flow is interrupted;

(d) Chemical feed equipment for pH control on pools fifty thousand gallons volume or greater;

(e) Any pool feeding with:

(i) Caustic soda (NAOH);

(ii) Carbon dioxide (CO₂); or

(iii) Other chemicals the department determines necessary to require metered and controlled feeding.

(23) **Heaters.** Where pool heating equipment is provided, owners shall:

(a) Locate equipment so any standing pilot is readily accessible; and

(b) Install equipment per NEC and UMC.

(24) **Ventilation.** Owners shall provide indoor pool facility ventilation conforming with ASHRAE pool facility standards.

(25) **Testing equipment.** Owners shall use testing equipment as noted in the water quality section under WAC 246-260-070(6).

(26) **Chemical storage.** Owners shall ensure chemical storage design and placement minimizes safety risks.

(27) **Restroom and plumbing fixtures.** Owners shall provide restroom and plumbing facilities at pools as follows:

(a) Where wading pool facilities are provided in conjunction with general use and limited use swimming pools, spas, or other water recreation facilities, the wading pool bathing load shall be added to the total load for consideration of plumbing fixture units;

(b) If a wading pool is the sole water recreation facility at a site, plumbing fixtures as described under Table 130.4 including:

- (i) Flush toilets and toilet tissue in dispensers;
- (ii) Shower facilities that:

(A) Deliver water at a temperature range of ninety to one hundred ten degrees Fahrenheit;

(B) Provide single service soap in nonglass dispensers.

(iii) Sinks provided with:

(A) Tempered or hot and cold running water;

(B) Single service soap in nonglass dispensers; and

(C) Single service towels or electric hand dryers.

(iv) Hose bibs with vacuum breakers conveniently accessible to pool and within one hundred feet; and

(v) Sewage disposed of in a manner approved by the department or local health officer.

NOTE: * "Living Units" means all units associated with limited use facilities intended to be served.

** Consideration for elevators adjacent to pool may allow variance from this requirement.

*** When wading pool bathing load exceeds 40 of either sex, the fixture units provided shall conform with the general use requirements for swimming pools.

(c) If owners limit the number of people within their facility to a certain number and post maximum occupancy loading, the number of plumbing fixture units may be based on that maximum occupancy.

(28) **Lighting.** Owners shall design and maintain pool facility lighting to:

(a) Illuminate indoor facilities, outdoor facilities used after dusk, and locker room facilities with a minimum lighting intensity maintained thirty inches above any walking surface, pool deck, or pool area of:

(i) Thirty foot-candles at indoor facilities;

(ii) Fifteen foot-candles at outdoor facilities;

(iii) Twenty foot-candles in locker rooms.

(b) Allow lifeguards or attendants to clearly see pool areas and walking surfaces;

(c) Meet any additional lighting requirements deemed necessary by the department or local health officer;

(d) Provide protective shielding for all lighting fixtures above walking surfaces and pool areas;

(e) Provide all indoor facilities with one or more pool area emergency lights designed to turn on in the event of a power failure. The emergency lighting shall conform to requirements of UL standard 924.

(29) **Signs.** Owners shall provide signs at pools which must convey the following conditions, but may be conveyed by any combination of words, pictures, or symbols:

(a) Prohibition of running or horseplay;

(b) Prohibition of use by persons with communicable diseases;

(c) Prohibition of use by persons under the influence of alcohol or drugs;

(d) Prohibition of food or drink in the pool water;

(e) In pools where lifeguards or attendants are not present, post requirements for facility use as required under WAC 246-260-140(3).

(30) **Food service.** When food service is provided, owners shall:

(a) At general use pool facilities, ensure food and beverage sale and consumption areas are separated from pool and deck. Special provisions may be made for allowing food and beverage service on the walkway provided a minimum six feet clear area is maintained between the pool edge and any tables or chairs provided for special facility functions;

(b) At limited use pool facilities, prohibit food and beverage in the pool water and maintain a minimum four-foot clear area between pool edge and any tables and chairs provided for food service;

(c) Provide trash containers;

(d) Prohibit glass containers in the pool facility.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-130, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-080, filed 3/12/90, effective 4/12/90; Regulation .98.080, effective 3/11/60.]

TABLE 130.4
PLUMBING FIXTURE MINIMUM REQUIREMENTS
FOR SOLE FACILITY WADING POOLS

Wading Pools with:	Toilets	Sinks	H.B.	Showers
1. Limited use wading pools with living units* within 100 feet and less than 3 stories	-	-	1	-
2. Limited use wading pools with living units >100 feet but < 500 feet and less than 3 stories.**	1	1	1	-
3. Limited use wading pools with living units > 500 feet but < 1/4 mile and/or with 3 or more stories**	1(M) 1(F)	1(M) 1(F)	1 -	- -
4. Limited use wading pools with living units > 1/4 mile or general use wading pools***	1(M) 1(F)	1(M) 1(F)	1 -	1(M) 1(F)

WAC 246-260-140 Operation of wading pool facilities. (1) **Operation plan.** Owners shall ensure proper operation to protect the public health, safety, and water quality by establishing practices and developing an operations manual addressing each of the following:

- (a) Physical pool facility components;
- (b) Personnel;
- (c) Users and spectators;
- (d) Environmental conditions.

(2) **Physical components.** Owners shall provide routine checks of the physical components:

(a) Ensuring all structural facilities the users come in contact are intact and free from undue wear or fatigue and replaced as needed;

(b) Eliminating adverse effects of water ponding on walking surfaces;

(c) Ensuring preventative maintenance on equipment essential for protection of the public health, safety, and water quality;

(d) Maintaining barrier protection;

(e) Ensuring treatment turnover is continuous twenty-four hours a day during seasons or periods of use and does not exceed three hours provided:

(i) Allowances shall be made for minor equipment maintenance;

(ii) Pools previously approved with turnover rates varying from subsection (2)(e)(i) of this section may continue to operate if water quality conditions conform with WAC 246-260-070.

(3) **Required personnel.** Owners shall ensure appropriate personnel at pool facilities as follows:

(a) A water treatment operator oversees that the water treatment components are adequately functioning to protect public health, safety, and water quality; and

(b) At pool facilities with no lifeguards, assistant lifeguards, or attendants, use shall be subject to the following conditions:

(i) When the pool is used by children twelve years of age or under, a responsible adult eighteen years of age or older shall accompany the children and be at the pool or pool deck at all times the children use the facility;

(ii) When used by persons seventeen years of age or under, a minimum of two people are at the pool facility at all times the pool is in use;

(iii) At general use pools, subdivision (b)(i) and (ii) of this subsection be posted; and

(iv) At limited-use pools, subdivision (b)(i) and (ii) of this subsection be posted and ongoing provisions notifying the responsible person of the conditions.

(4) **Personnel duties and equipment.** Owners shall ensure the specific duties and equipment of designated personnel include:

(a) Lifeguards, during periods of lifeguarding, guard pool facility users in areas assigned;

(b) Assistant lifeguards when provided at the pool used under the following conditions:

(i) Assistant lifeguard limited to guarding responsibility of areas four feet or less in depth; and

(ii) A lifeguard overseeing the activities of the assistant lifeguard.

(c) Attendants when provided oversee use of the pool by the bathers and provide supervision and elementary rescues, such as reaching assists to bathers in need;

(d) Water treatment operators oversee, as needed, the water treatment components are functioning adequately to protect public health, safety, and water quality;

(e) Notification of responsible persons on the conditions for use at pool facilities not requiring lifeguards, and for which no lifeguards or attendants are present. A responsible person means a person having responsibility for overseeing users, including but limited to a person:

(i) Renting an apartment, hotel, motel, RV camp site; or

(ii) Who is an owner or member of a condominium, homeowner's association, mobile home park, or private club with a pool facility.

(f) Lifeguards, assistant lifeguards, or attendants:

(i) Wear distinguishing suit, uniform, or emblem; and

(ii) Equipped with a whistle or a signaling device.

(5) **Personnel training.** Owners shall require training for each type of personnel including:

(a) Lifeguards shall maintain a current certificate in the following:

(i) Standard first aid and adult, single rescue CPR through ARC or American Heart Association; and

(ii) Advanced lifesaving, advanced lifesaving review, or lifeguard training through ARC; or

(iii) YMCA lifeguarding or crossover course through the YMCA; or

(iv) Lifeguard through the National Lifeguard Service, Canadian; or

(v) Lifeguard through National Pool and Waterpark Lifeguard Training; or

(vi) Basic lifeguard through advanced lifeguard training international; or

(vii) Other training the department determines equivalent; and

(viii) Thirty-six months after enactment of the personnel training provisions of this chapter, the department shall no longer recognize training for lifeguards in advanced lifesaving, or advanced lifesaving review through the ARC.

(b) Assistant lifeguards shall maintain current certificates and meet the requirements in the following:

(i) Adult, single rescue CPR through ARC or American Heart Association; and

(ii) Emergency water rescue with ARC; or

(iii) Bronze medallion award through the Royal Lifesaving Society of Canada; or

(iv) Shallow water lifeguard through the National Pool and Waterpark lifeguard training; or

(v) Other training the department determines equivalent; and

(vi) Be fourteen years of age or older.

(c) Attendant shall maintain current certificates and meet the requirements in the following:

(i) Adult, single rescue CPR through ARC or the American Heart Association; and

(ii) Basic water safety with ARC; or

(iii) Other training the department determines equivalent; and

(iv) Be sixteen years of age or older.

(d) Water treatment operator shall have specific knowledge in provision of pool water chemistry, filtration, pumping equipment and rules and regulations pertaining to pool facilities;

(e) When pool facility is using chlorine gas, an operator shall have specific training as follows:

(i) Proper operation of the chlorination equipment and routine maintenance procedures;

(ii) Basic understanding of physical and chemical properties of chlorine gas under pressure;

(iii) Basic understanding on use of leak detection and emergency safety equipment;

(iv) Basic knowledge of proper first aid procedures and response for accidental inhalation of chlorine gas;

(v) Six hours or more of formal instruction once every three years or three hours or more every eighteen months with certificate of training provided.

(f) Persons shall be exempt from having current CPR or standard first aid certificates if the persons hold current certificates in any of the following:

(i) Community CPR in place of adult, single rescue CPR;

(ii) In place of standard first aid:

(A) Advanced first aid;

(B) First responder;

(C) Emergency medical technician; or

(D) Paramedic.

(iii) Other training the department recognizes as equivalent or exceeding current requirements.

(6) **Bather use.** Owners shall establish conduct rules for users to ensure health and safety. The rules shall include signage noted under WAC 246-260-130(29).

(7) **Environmental conditions.** Owners shall monitor various environmental conditions affecting the facility or the user and take appropriate action in response to these factors, including electrical storms, visibility problems, etc.

(8) **Closure.** Owners shall close the facility when the facility or portion thereof presents an unhealthy, unsafe, or unsanitary condition. These conditions include lack of compliance with the water quality or operation requirements as detailed under WAC 246-260-070 and 246-260-140.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-140, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-085, filed 3/12/90, effective 4/12/90.]

WAC 246-260-150 Spray pool design, construction, and equipment. (1) **Location.** Owners shall locate pools to:

(a) Minimize pollution by dust, smoke, soot, and other undesirable substances; and

(b) Eliminate pollution from surrounding surface drainage.

(2) **Materials.** Owners shall only use structure and equipment materials which are nontoxic, durable, inert, impervious to water and easily cleanable.

(3) **Walking surfaces.** Owners shall design and maintain walking surfaces:

(a) Uniformly sloping away from the pool or pools a minimum of one-fourth inch per foot and a maximum of one-half inch per foot;

(2003 Ed.)

(b) Of a nonslip finish not presenting a tripping hazard;

(c) Equipped with sufficient drains to prevent standing water;

(d) Of easily cleanable impervious finishes;

(e) Four feet or more in width, extending around fifty percent or more of the spray pool;

(f) In conformance with department-established guidelines for any resilient artificial surfaces.

(4) **Pool structure.** Owners shall ensure general pool requirements include:

(a) Pool surfaces with nonslip finishes and impervious to water;

(b) Uniform pool floor slopes not to exceed one foot in twelve feet;

(c) Provision for using an approved potable water supply. Water shall not be recirculated, but drain to waste after use in the spray pool; or

(d) If a spray pool facility is used in conjunction with a swimming pool over thirty thousand gallons in volume, recirculated swimming pool water may be used in the spray pool if:

(i) Means for treatment of the water draining from the spray pool is provided including filtration, disinfection, and recirculation through a separate spray pool treatment system;

(ii) Such system is sized on the maximum introduction rate of water from the recirculated swimming pool water;

(iii) Treated spray pool water is introduced into the swimming pool recirculation system;

(iv) Proper safeguards are employed to prevent interruption of proper swimming pool facility operation; and

(v) Design and construction of treatment equipment and associated facilities conform with swimming pool design requirements.

(5) **Inlets and outlets.** Owners shall provide pool inlets and outlets with:

(a) Spray nozzles not inflicting damage to users. Maximum flow through nozzles within close proximity to bathers shall not exceed fifteen fps at the nozzle;

(b) The drain located at the low point of the pool and with sufficient capacity and design to prohibit water accumulation in the pool. The outlet drain shall:

(i) Be located at the low point of the pool;

(ii) Have openings not allowing a sphere over one-half inch in diameter to pass;

(iii) Use grate design to withstand forces of users;

(iv) Have grates removable only with specific tools; and

(v) On grates attached to recirculating pumps, have:

(A) Total open area of grates sized to prevent a suction hazard dangerous to the user;

(B) Grates on drains with a maximum flow of one and one-half feet per second, or net area of outlet four times or more the discharge pipe area.

(6) **Valves.** Owners shall provide valves at appropriate locations to allow isolation and maintenance of equipment.

(7) **Make-up water.** Owners shall ensure a source of make-up water and associated pool piping:

(a) Coming from a supply conforming with chapter 246-290 WAC;

(b) Preventing cross connections using a minimum air gap of two pipe diameters or approved backflow prevention

devices between the make-up water source and the spray pool water or waste water.

(8) **Waste water discharge.** Water used in a pool shall be disposed of in a manner acceptable to the local health jurisdiction.

(9) **Signs.** Owners shall provide signs at pools about general requirements for facility use. Owners may use any combination of words, pictures, or symbols conveying the prohibition of the following conditions:

- (a) Running or horseplay;
- (b) Use by persons with communicable diseases;
- (c) Use by persons under the alcohol or drug influence;
- (d) Food or drink in pool water.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-150, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-090, filed 3/12/90, effective 4/12/90; Regulation .98.090, effective 3/11/60.]

WAC 246-260-160 Operation of spray pool facilities.

(1) **Operation plan.** Owners shall ensure proper operation to protect the public health, safety, and water quality. An operations plan shall address each of the following:

- (a) Physical pool facility components;
- (b) Personnel;
- (c) Users and spectators;
- (d) Environmental conditions.

(2) **Physical components.** Owners shall provide routine checks of the physical components:

(a) Ensuring all structural facilities which the users come in contact are intact and free from undue wear or fatigue and replace as needed;

(b) Eliminating adverse effects of water ponding on walking surfaces;

(c) Ensuring preventative maintenance on equipment essential for protection of the public health, safety, and water quality.

(3) **Required personnel and duties.** Owners shall provide personnel to oversee the spray pool facility ensuring proper operation and maintenance. When the facility is using recirculated water, a water treatment operator shall oversee water quality and equipment operation.

(4) **Bather use.** Owners shall establish rules of conduct for users to ensure health and safety. The rules shall include conditions noted under WAC 246-260-150(9).

(5) **Environmental conditions.** Owners shall monitor various environmental conditions affecting the facility or the user and take appropriate action in response to these factors, including electrical storms, visibility problems, etc.

(6) **Closure.** Owners shall close the facility when the facility or portion thereof presents an unhealthy, unsafe, or unsanitary condition. The conditions include lack of compliance with the water quality and/or operation requirements as detailed under WAC 246-260-070 and 246-260-160.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-160, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-095, filed 3/12/90, effective 4/12/90.]

WAC 246-260-170 Water recreation facility pools not in operation. Owners of pool facilities not in operation shall maintain one of the following conditions:

(1) Inoperable spa, swimming, and wading pool access shall be locked; and

(2) If pools are abandoned, backfilled with appropriate fill material.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-098, filed 3/12/90, effective 4/12/90.]

WAC 246-260-180 Bathing beaches. No bathing beach shall be maintained or operated when such water is determined by the health officer to be so polluted or subject to pollution as to constitute a menace to health if used for bathing. Where bathhouse and toilet facilities are provided for use of bathers they shall be constructed, maintained and operated in a sanitary manner approved by the health officer.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-180, filed 12/27/90, effective 1/31/91; Regulation .98.070, effective 3/11/60.]

WAC 246-260-200 Water recreation industry requirements. All owners of companies selling swimming pools, spa pools, wading pools or spray pools, and their associated facilities regulated by chapter 246-260 WAC shall furnish each purchaser a complete set of operating instructions and shall include detailed information on the safe use of the facilities including:

(1) Proper treatment methods to ensure water quality and sanitation;

(2) Proper safety procedures to reduce injury risks;

(3) Specific safety instructions for use at facilities having water temperatures ninety-five degrees Fahrenheit or more on the health effects of hot water and a specific caution and explanation on the health effects of hot water on pregnant women and young children.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-200, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-100, filed 3/12/90, effective 4/12/90; Regulation .98.100, effective 3/11/60.]

WAC 246-260-210 Technical advisory committee. (1) The department shall appoint a technical advisory committee to assist in the following:

(a) Reviewing and drafting of proposed rules;

(b) Development of guidelines for use of new products, equipment, procedures, and periodic program review.

(2) The technical advisory committee shall have meetings whenever the department determines necessary.

(3) The technical advisory committee water recreation pool facility membership shall include representation from the following:

(a) General use pool facility;

(b) Limited use pool facility;

(c) Local representative from the spa and pool industry (NSPI);

(d) Washington recreation and parks association representative;

(e) Engineer or architect design consultant;

(f) Eastern and western Washington local environmental health authority representatives;

(g) Department representative;

(h) RWCF owner representative, as appropriate, as described under chapter 246-262 WAC.

(4) The technical advisory committee may appoint subcommittees as the committee determines appropriate to address specific issues.

(5) The department shall maintain minutes of meetings.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-210, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-102, filed 3/12/90, effective 4/12/90.]

WAC 246-260-220 Restrictions on animals. Owners shall prevent animal access to the water recreation pool facility except by users or spectators requiring services of guide dogs accompanying them to the deck area.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-104, filed 3/12/90, effective 4/12/90.]

WAC 246-260-230 Variance. (1) The department or local health officer may allow variance from this chapter or portions thereof provided:

(a) The local health officer receives written department concurrence;

(b) The department receives written local health officer concurrence in jurisdictions with active water recreation facilities programs;

(c) Data and/or research provides sufficient evidence to the satisfaction of the department or local health officer the water recreation facility, or considered components, adequately protects public health and safety, as well as water quality;

(d) The variance is consistent with the intent of this chapter.

(2) The department and local health officer shall provide the board an annual summary of variances granted January 31 of the following year or at the board's request at any time. The board may evaluate such variances granted to determine if the provisions of this chapter are met.

(3) The board may, in its discretion, make provisions to submit variance requests to the board for review and decision.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-110, filed 3/12/90, effective 4/12/90; Order 715, § 248-98-110, filed 9/14/72.]

WAC 246-260-240 Substitution. The board authorizes the department to allow substitutions of equipment, facilities, or procedures required by chapter 246-260 WAC when, in the sole determination of the department, data and/or research provide sufficient evidence that such substitution is equivalent to the requirement and will adequately provide for

(2003 Ed.)

the protection of the public health and safety of persons using the water recreation facility.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-260-240, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-120, filed 3/12/90, effective 4/12/90; Order 715, § 248-98-120, filed 9/14/72.]

WAC 246-260-250 Enforcement. (1) The department or, if enforcement responsibility is assigned under a joint plan of operation in WAC 246-260-020, the local health officer:

(a) Shall enforce chapter 246-260 WAC rules; or

(b) May refer cases within the department's or local health officer's jurisdiction to the local prosecutor's office or the office of the attorney general, as appropriate.

(2) When a water recreation facility (WRF) is in violation of chapter 70.90 RCW provisions or chapter 246-260 WAC rules, appropriate enforcement action may be initiated by the department, local health officer, local prosecutor's office, or office of the attorney general. Enforcement actions may include any one or a combination of the following:

(a) Informal administrative conferences to explore facts and resolve problems, convened at the request of the department, local health officer, or owner;

(b) Orders directed to the water recreation facility (WRF) owner and/or operator and/or the person causing or responsible for the violation of the chapter 246-260 WAC rules;

(c) Imposition of civil penalties of up to five hundred dollars per violation per day as authorized under RCW 70.90.200;

(d) Denial, suspension, or revocation of operating permits; and

(e) Civil or criminal action initiated by the local prosecutor's office or by the office of the attorney general.

(3) Orders authorized under this section include, but are not limited to the following:

(a) Requiring corrective measures necessary to effect compliance with chapters 246-260 WAC or 70.90 RCW. Such orders may or may not include a compliance schedule; and

(b) Orders to stop work and/or refrain from using any WRF or portion thereof or improvement thereto until all permits, certifications, and approvals required by statute or rule are obtained.

(4) An order issued under this section shall:

(a) Be in writing;

(b) Name the facility and the person or persons to whom the order is directed;

(c) Briefly describe each action or inaction constituting a violation of chapters 70.90 RCW or 246-260 WAC rules;

(d) Specify any required corrective action, if applicable;

(e) Provide notice, as appropriate, that continued or repeated violation may subject the violator to:

(i) Civil penalties of up to five hundred dollars;

(ii) Denial, suspension, or revocation of the facility's operating permit; or

(iii) Referral to the county prosecutor or attorney general's office.

(f) Provide the name, business address, and phone number of an appropriate staff person who may be contacted regarding an order.

(5) Service of an order shall be made:

(a) Personally, unless otherwise provided by law; or

(b) By certified mail return receipt requested.

(6) Under department or local health officer adopted rules or policies, civil penalties of up to five hundred dollars per day may be assessed against any person violating provisions of chapter 70.90 RCW or 246-260 WAC.

(7) The department or local health officer shall have cause to deny the operating permit application or reapplication or to revoke or suspend a required operating permit of any person who has:

(a) Previously had:

(i) An operating permit suspended or revoked; or

(ii) An operating permit application denied for reason.

(b) Failed or refused to comply with provisions of chapters 70.90 RCW and 246-260 WAC or any other statutory provision or rule regulating the WRF construction or operation; or

(c) Obtained or attempted to obtain an operating permit or any other required certificate or approval by fraudulent means or misrepresentation.

(8) For the purposes of subsection (7) of this section, a person shall be defined to include:

(a) Applicant;

(b) Reapplicant;

(c) Permit holder; or

(d) An individual associated with subsection (8)(a), (b),

or (c) of this section including, but not limited to:

(i) Board members;

(ii) Officers;

(iii) Managers;

(iv) Partners;

(v) Association members;

(vi) Agents; and

(vii) In addition, third persons acting with the knowledge of such persons.

(9) The department or local health officer may summarily suspend an operating permit, other required permit, license, or certification without a prior hearing if the department or local health officer:

(a) Finds public health, safety, or welfare imperatively requires emergency action; and

(b) Incorporates a finding to that effect in its notice or order.

[Statutory Authority: RCW 70.90.120.92-02-020 (Order 226B), § 246-260-250, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.91-02-051 (Order 124B), recodified as § 246-260-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120.90-07-010 (Order 042), § 248-98-130, filed 3/12/90, effective 4/12/90.]

WAC 246-260-260 Hearings. (1) A person aggrieved by the department's or local health officer's denial, suspension, or revocation of any permit may request an administrative hearing.

(a) A hearing requested to contest a local health officer's action shall be governed by the local health jurisdiction's rules for hearings.

[Title 246 WAC—p. 488]

(b) A hearing requested to contest the department's action shall be governed by section 377, chapter 3, Laws of 1991. The applicant's and permit holder's right to an adjudicative proceeding is in the same law.

(c) The procedure for the adjudicative proceeding is in this chapter and in chapter 246-08 WAC.

(2) Any person aggrieved by the department's or local health officer's application of civil penalties may request an administrative hearing.

(a) A hearing requested to contest a local health officer's action shall be governed by the local health jurisdiction's rules for hearings.

(b) A hearing requested to contest the department's action shall be governed by section 377, chapter 3, Laws of 1991. When the department imposes a civil fine, the right of a person to an adjudicative proceeding is in the same law.

(c) The procedure for the adjudicative proceeding is in this chapter and in chapter 246-08 WAC.

[Statutory Authority: RCW 70.90.120.92-02-020 (Order 226B), § 246-260-260, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.91-02-051 (Order 124B), recodified as § 246-260-260, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120.90-07-010 (Order 042), § 248-98-135, filed 3/12/90, effective 4/12/90.]

WAC 246-260-9901 Fees. (1) CONSTRUCTION PERMIT FEES. The department establishes the fees listed in Table 990.1 for construction permits for carrying out its duties under WAC 246-260-030.

**TABLE 990.1
CONSTRUCTION PERMIT FEES**

TYPE OF FACILITY	CONSTRUCTION PERMIT PLAN REVIEW FEES
I. Swimming Pools	
(a) 125,000 gallons or more in volume	\$550.00
(b) Greater than 75,000 gallons and less than 125,000 gallons	\$329.00
(c) Greater than 40,000 gallons and less than 75,000 gallons	\$216.00
(d) Less than 40,000 gallons	\$165.00
II. Spa Pools	\$165.00
III. Wading Pools	\$108.00
IV. Spray Pools	\$82.00
V. Alterations, renovations, or modifications to existing swimming, spa, wading or spray pools, not to exceed two-thirds of new construction permit fees, or \$66/hour (which ever is less).	
VI. The fees for multiple pools at the same location will be based upon the highest fee for one facility and two thirds of the fee for each additional facility. For example: The fee for a 100,000 gallon swimming pool, a 60,000 gallon swimming pool, and a spa pool will be: \$329 + \$144 + \$110 = \$583. The fees for a small 30,000 gallon swimming pool and a spa pool will be \$165 + \$110 = \$275.	

(2) OPERATING PERMIT FEES The department establishes the fees listed in Table 990.2 for operating permits for carrying out its duties under WAC 246-260-040.

**TABLE 990.2
FEE SCHEDULE
OPERATING PERMITS
Type + Number of Facilities**

	Single Swim Pool	Single Spa Pool	Single Wading Pool	Spray Pool or Pools	Each Additional Swim, Spa, or Wading Pool
Operating Permit 0-6 month	\$282.00	\$247.00	\$205.00	\$102.00	\$61.00
Operating Permit 6-12 months	\$462.00	\$411.00	\$360.00	\$154.00	\$82.00

Other Terms and Conditions:

- (1) The department may charge an additional fee of \$85 plus associated laboratory costs for any inspections beyond those provided under the annual operating permit when necessary due to violations of such items as (a) noncompliance with water quality standards, and (b) failure to comply with operational requirements for health and safety.
- (2) The department may charge an alternate annual fee for an operating permit based on direct and indirect costs associated with issuance of the permit when arrangements are made with local health jurisdictions to administer all or portions of the duties associated with the operating permit. Except, that the fee for this operating permit cannot exceed the cost established by the previous portions of this regulation, but the fee may be less.
- (3) During the first year of development of the operating permit and for new pool facilities built hereafter, or pools temporarily closed (significant period of several months) and reopened, there are provisions for prorating the costs for the operating permits.
- (4) A reduction in fees, up to but not exceeding thirty percent, may be granted by the department when a facility operator can demonstrate a satisfactory level of training in pool safety, water quality, maintenance and operations. The department will develop criteria for such fee reductions within six months of the adoption of this regulation.
- (5) For limited use facilities requiring operating permits which are serving less than fifteen living units, the operating permit shall be fifty percent of the fee. However, reinspection fees when necessary, will be charged as noted in condition (1).
- (6) Fees for multiple facilities at the same physical location shall have a maximum FEE CAP as follows: Seasonal (0-6 months) WRF's: \$750 NOTE: The third and subsequent pool/spa at the same location will be charged \$50 for each such additional pool/spa. Year around (>6 months) WRF's \$1000 NOTE: The third and subsequent pool/spa at the same physical location will be charged \$65 for each such additional pool/spa.

Examples of Fees Charged:

- (1) If more than one pool at a facility and one is a year-round pool and another is a seasonal pool—year-round pool is base cost, seasonal pool is charged at additional fee charge. For example: Year-round spa = \$411 plus seasonal swimming pool is \$61 = \$472 total operating permits.
- (2) If a single swimming pool and a single spa pool is used at the facility, the fee schedule will include fees as noted. For a 0-6 month permit, the primary fee for the single swimming would be \$282 and the spa pool would be viewed as the second pool at the facility and

would have a fee of \$61, total operating permit fees would be \$343.

- (3) If there are 12 pools/spas at a single year-around pool facility, the FEE CAP would apply and the maximum fee of \$1000 would be charged. (\$462 base fee, \$82 for first additional pool/spa, \$65 for the remaining ten year-around pools/spas (10 x \$65 = \$650)) Total fee before fee cap = \$462 + \$82 + \$650 = \$1194. After FEE CAP the total fee = \$1000. If approved training were credited to this facility for the maximum 30% discount, the 30% would be applied to the FEE CAP fee of \$1000; \$1000 - 30% = \$700.

[Statutory Authority: RCW 43.70.250, 70.90.150, and 43.20B.250. 01-14-047, § 246-260-9901, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 70.90.150 and 43.20B.020. 94-11-056, § 246-260-9901, filed 5/11/94, effective 6/11/94.]

WAC 246-260-998 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter or the application of the provision to other persons or circumstances shall not be affected.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-260-998, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 90-07-010 (Order 042), § 248-98-998, filed 3/12/90, effective 4/12/90.]

Chapter 246-262 WAC

RECREATIONAL WATER CONTACT FACILITIES

WAC

246-262-001	Purpose and authority.
246-262-010	Definitions.
246-262-020	General administration.
246-262-030	Construction permit.
246-262-040	Operating permit.
246-262-050	Water quality standards, analysis, and sample collection.
246-262-060	General design, construction, and equipment.
246-262-070	Specific design, construction, and equipment.
246-262-080	Operation.
246-262-090	Monitoring, reporting, and recordkeeping.
246-262-100	Inspection.
246-262-110	Advisory committee.
246-262-120	Enforcement.
246-262-130	Notice of decision—Adjudicative proceeding.
246-262-140	Insurance.
246-262-150	Compliance.
246-262-160	Variance.
246-262-170	Innovations—Substitutions.
246-262-990	Fees.

WAC 246-262-001 Purpose and authority. The purpose of these rules is to protect the health, safety, and welfare of users of recreational water contact facilities (RWCFs). The rules as set forth are adopted per RCW 70.90.120.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-262-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-010, filed 6/22/88.]

WAC 246-262-010 Definitions. (1) "Advanced first aid" means a course of instruction recognized by the American Red Cross, department of labor and industries, the U.S. Bureau of Mines, or fire services training program.

(2) "ANSI" means American National Standard Institute.

(3) "Approved" means the department or local health officer has stated in writing that the design plans and specifications are in accordance with chapter 246-262 WAC.

(4) "ARC" means American Red Cross.

(5) "Architect" means a registered architect currently licensed under chapter 18.08 RCW in Washington state.

(6) "ASTM" means American Society for Testing Material.

(7) "Attendant" means a person trained to operate an attraction and control the users in a safe orderly manner.

(8) "Attraction or ride" means any of the specific types of recreational facilities involving partial or total immersion or intentional contact with the water designated for public recreational use.

(9) "Biomechanics" means the study of the human body as a system operating under the laws of Newtonian mechanics and the biological laws of life.

(10) "Board" means the state board of health.

(11) "Boogie or mini-surf board" means any semirigid device used in a wave pool for flotation or as a riding device.

(12) "Centerline" means the path defined by geometric midpoints of a component or structure, generally used in consideration of the slide path in flume rides.

(13) "Communication system" means any combination of devices permitting the passage of or exchange of messages between park operating personnel and between operating personnel and users. Systems can include, but are not limited to, two-way radios, hardwired intercoms, horns, whistles, hand signals, direct voice, signs, or equivalent.

(14) "Contaminant" means any physical, chemical or biological substance present in the RWCF water which may adversely affect the health or safety of the user and/or the quality of the water.

(15) "CNCA" means Council for National Cooperation in Aquatics.

(16) "Cross-connection" means any physical arrangement connecting:

(a) A potable water system directly or indirectly, with anything other than another potable water system; or

(b) A RWCF to any potable or nonpotable water source capable of contaminating either the RWCF or potable water source as a result of backflow.

(17) "Department" means the department of health.

(18) "Discharge section" means the component or components making up the exit of the water slide, water tube, inner tube ride, speed slide, ramp slide, drop slide or drop tube, or kiddie flume. These components are the elements controlling the final direction and speed of the user.

(19) "Diving envelope" means the minimum dimensions of an area within the pool necessary to provide entry from a

diving board, platform, or attraction segment where users enter above pool water level.

(20) "Drop slide or drop tube ride" means a sloped trough, chute, or tube exiting the user above the pool operating water level.

(21) "Engineer" means a registered professional engineer currently licensed under chapter 18.43 RCW in Washington state.

(22) "Entry access points" means the areas where users enter an attraction.

(23) "Entry rate" means the frequency at which users are permitted access to the attraction.

(24) "Ergonomics" means a multidisciplinary activity dealing with the interactions between humans and their environment plus the traditional environmental elements atmosphere, heat, light, and sound, as well as objects with which the user comes in contact.

(25) "FINA" means Federation Internationale de Natation Amaueur.

(26) "Flume or tube entry" means the area at which users enter a water slide, water tube, inner tube ride, speed slide, drop slide, drop tube, or kiddie flume.

(27) "fps" means feet per second.

(28) "gpm" means gallons per minute.

(29) "IAAPA" means International Association of Amusement Parks and Attractions.

(30) "Injury or illness report" means the written record of all facts regarding an injury or illness associated with the RWCF.

(31) "Inner tube ride" means an attraction where users ride inner tube-like devices through a series of chutes, channels, flumes, and pools.

(32) "Innovative recreational water contact facility" means any type of RWCF currently unregulated.

(33) "Intermediate pool" means any pool between the entry and exit pools in attraction using a series of pools.

(34) "Kiddie flume or tube attraction" means a flume, chute, or tube designated for and restricted to use by small children.

(35) "Lifeguard" means an individual currently certified by red cross in advance lifesaving or lifeguard training, or YMCA senior lifesaver, or equivalent certification through the royal Canadian lifeguard services.

(36) "Lifeguard station" means the designated work station of the lifeguard.

(37) "Local health officer" means the health office of the city, county, or city-county department or district or a representative authorized by the local health officer.

(38) "mg/l" means milligrams per liter.

(39) "Multi-activity pool" means a pool with more than one type of attraction (i.e., an adult activity pool with a series of tubes, chutes, cable rides, etc., intended for use by individuals with specific swimming abilities).

(40) "NSF" means National Sanitation Foundation.

(41) "NSPI" means National Spa and Pool Institute.

(42) "Operating levels" means water levels maintained within attractions during use for proper operation of facility and for controlling safety and sanitation.

(43) "Operations" means all aspects of a RWCF, which must be controlled to make the facility safe, healthy, and usable for the purpose intended.

(44) "Owner" means a person owning and responsible for a RWCF or authorized agent.

(45) "Person" means an individual, firm, partnership, co-partnership, corporation, company, association, club, government entity, or organization of any kind.

(46) "Ponding" means a condition where water fails to drain from walking surfaces.

(47) "ppm" means parts per million.

(48) "Primary zone of visual coverage" means the area assigned to a lifeguard or attendant for primary visual surveillance of user activity.

(49) "Radius of curvature" means the radius arc which denotes the curved surface from the point of departure from the vertical sidewall (springline) of the pool to the pool bottom.

(50) "Ramp slide" means a slide allowing one or more users to slide in unison down a straight incline to a runout or a receiving pool.

(51) "Recirculation filter water" means water which is recirculated by the RWCF for treatment purposes, i.e., filtration and disinfection.

(52) "Response time" means elapsed time between bather distress and initiation of rescue assistance by a lifeguard (or attendant where applicable).

(53) "RWCF" means recreational water contact facility which is an artificial water associated facility with design and operational features that provide patron recreational activity which is different from that associated with a conventional swimming pool and purposefully involves immersion of the body partially or totally in the water and includes, but is not limited to, water slides, wave pools, and water lagoons.

(54) "Secretary" means the secretary of the department of health.

(55) "Serious injury" means any injury requiring admission to a hospital.

(56) "Speed slide or speed tube" means a sloped trough, flume, tube, or roller track having long straight and/or steep drops where users sustain speeds of twenty miles per hour or more.

(57) "Springline" means the point from which the pool wall breaks from vertical and begins its arc in the radius of curvature (for coved construction) to the bottom of the pool.

(58) "Surfboard" means a rigid device used in a wave pool for riding.

(59) "Tail coverage" means providing insurance coverage for a given period of time for discovery of claims made after the policy term for "claims made" type of insurance.

(60) "Total turnover" means the time it takes for the pool attraction water volume to be recirculated as a sum of the flows from treatment turnover and attraction recirculation systems turnover.

(61) "Treatment turnover" means the minimum time necessary to circulate the entire attraction water volume through the recirculation filter system.

(62) "T.U." means turbidity unit as measured by the nephelometric method.

(63) "Wading activity pool" means a pool or area less than twenty-four inches in total water depth with activities intended for younger children.

(64) "Walking surface" means any direct access surface to the attractions or change rooms where the user will be in bare feet. Areas set aside for picnicking, sunbathing, and lounging are excluded.

(65) "Water slide or water tube" means a sloped trough-like flume or tube structure of varying slope and direction using water as a lubricant and/or method of regulating the rider speed.

(66) "Water treatment operator" means the person appointed to operate the mechanical equipment and perform related water quality monitoring for proper operation of the physical facility.

(67) "Wave pool" means a recreational pool producing waves which usually begin at the deep end and proceed toward and dissipate at the shallow end.

(68) "WWA" means World Waterpark Association.

[Statutory Authority: RCW 70.90.120, 92-02-020 (Order 226B), § 246-262-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-262-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-020, filed 6/22/88.]

WAC 246-262-020 General administration. (1) The department and the local health officer for each local health jurisdiction containing a RWCF shall develop a joint plan of operation listing the roles of each agency for administering these rules. The plan shall designate who will be responsible for:

- (a) Plan review;
- (b) Permit issuance;
- (c) Inspection;
- (d) Surveillance; and
- (e) Enforcement.

(2) The department shall have information on which agency to contact for obtaining construction and operation permits.

(3) Fees may be charged as authorized in RCW 70.90.-150.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-262-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-030, filed 6/22/88.]

WAC 246-262-030 Construction permit. (1) Persons planning to construct, alter, or modify a RWCF, excluding routine maintenance, shall provide the following to the department or local health officer for review and approval:

- (a) A completed construction permit application;
- (b) Three sets of plans and specifications prepared and signed by an engineer or architect; and
- (c) A report prepared by an engineer certifying the design of the RWCF is consistent with accepted safety engineering practices and industrial standards. Such engineer shall have experience in safety design, including ergonomic aspects of biomechanics of RWCFs, amusement rides, or equal.

(2) Owners may schedule a predesign meeting with the designer and the department or local health officer to determine if the project is consistent with the intent of these rules;

(3) Following review of the completed permit application and plans and specifications, the department or local health officer shall:

(a) Forward written approval, including construction permit, or denial to the owner;

(b) Forward a copy of approved plans to the designer; and

(c) Forward a copy of the approval letter to the department or local health officer and local building department.

(4) The owner shall ensure any construction, modification, or alteration is completed according to approved plans and specifications;

(5) Upon completion of RWCF construction, alteration, or modification and prior to use, owners shall:

(a) Submit to the department or local health officer a construction report signed by an engineer or architect certifying that construction is substantially in compliance with approved plans and specification; and

(b) Notify the department or local health officer at least five working days prior to intended use of the facility.

(6) Owners of the RWCF must comply with all other applicable agency codes and standards. These include, but are not limited to:

(a) The National Electrical Code, chapter 19.28 RCW and chapter 296-46 WAC as determined by the electrical section of the Washington state department of labor and industries.

(b) Local gas piping and appliance codes, American Gas Association standards, and certification meeting the latest ANSI Z21.56 or other applicable and equivalent standards;

(c) Local building authority standards, including structural design of components;

(d) State and local plumbing authority standards;

(e) Washington state department of labor and industries requirements for pressure vessels under chapter 70.79 RCW and chapter 296-104 WAC; and

(f) Codes designated under chapter 70.92 RCW for handicapped accessibility.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-262-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-040, filed 6/22/88.]

WAC 246-262-040 Operating permit. (1) No person shall operate a RWCF without a current operating permit issued by the department or local health officer.

(2) To obtain an operating permit, owners of a RWCF must provide information to the department or local health officer that shows the RWCF is in compliance with these rules.

(3) Operating permits shall be:

(a) Valid for one year;

(b) Renewed annually; and

(c) Nontransferable without written consent of the department or local health officer. For purposes of this section, a change in management of a corporation, partnership, association, or other nonindividual business entity shall create a new person requiring either consent to a permit transfer or issuance of a new permit upon proper application.

(4) The department or local health officer issuing the operating permit may revoke or suspend the permit if the

RWCF is not operated in accordance with chapter 70.90 RCW or chapter 246-262 WAC.

[Statutory Authority: RCW 70.90.120, 92-02-020 (Order 226B), § 246-262-040, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-262-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-050, filed 6/22/88.]

WAC 246-262-050 Water quality standards, analysis, and sample collection. (1) Owners shall maintain waters free from harmful levels of disease-producing organisms, toxic chemicals, or adverse physical conditions.

(2) Owners shall maintain RWCF waters to meet standards of bacteriological quality. Standards include:

(a) Heterotrophic plate counts not to exceed a density of two hundred bacteria per milliliter in any series of tests; and

(b) Total coliform density not to exceed an average of one coliform bacteria per one hundred milliliters in any series of tests.

(3) Owners shall maintain continuous and effective methods of disinfection of RWCF waters at all times with use of:

(a) Chlorine or bromine as described in Table 1 of this section; and/or

(b) Alternate forms of disinfection which meet the following criteria:

(i) Registered with the environmental protection agency, if necessary;

(ii) Registered with the Washington state department of agriculture, if necessary;

(iii) Conformance with NSF standard 50 or equal when applicable; and

(iv) Adherence to guidelines established by the department.

(4) Owners shall maintain:

(a) Physical and chemical conditions within the ranges specified in Table 2 of this section; and

(b) Cleanliness by:

(i) Closing an affected area of the RWCF or affected portion when contaminated with feces, vomit, sewage, or other hazardous or unknown material until the area is clean, disinfected, and free of the hazardous material;

(ii) Daily removal of scum or floating material on the pool water surface; and

(iii) Continuous removal of scum or floating material by action of overflow of pool water with flotsom screened and filtered.

(5) Persons collecting water samples for laboratory analysis shall:

(a) Collect and transport samples for chemicals and micro-organisms based on the most recently published edition of standard methods for the examination of water and waste/water analysis published jointly by the American Public Health Association/Water Pollution Control Federation and American Waterworks Association; hereafter, it is referred to as "standard methods;"

(b) Have laboratory tests performed per "standard methods" at laboratories approved by the department to provide such analyses;

(c) Provide adequate data for completing analyses; and

(d) Use water sample bottles approved by the department for collection of samples.

(6) Persons shall use field test kits with a suitable range of accuracy for the parameters routinely measured as noted in Table 3 of this section.

(7) Owners shall require and ensure addition of chemicals or materials to RWCF water only when the use has been approved or recognized as acceptable by the department. Current lists of approved or acceptable materials are available from the department.

(8) Owners shall perform additional tests as directed by the department or local health officer.

TABLE 1
MINIMUM AND MAXIMUM LEVELS OF DISINFECTANTS

Currently Recognized Disinfectants	Type of Residual Measured	pH Ranges			Maximum Residual Level in mg/l*
		7.2-7.49;	7.5-7.79;	7.8-8.0	
1. Chlorine	Free available chlorine	1.0	1.4	1.8	8
2. Chlorinated cyanurate	Free available chlorine	1.5	2.0	2.8	8
3. Bromine	Total available bromine	2.0	2.5	3.5	8

Note: * Maximum residual or manufacturer's recommendation (whichever is less).

TABLE 2
ACCEPTABLE RANGES OF SELECTED PHYSICAL AND CHEMICAL WATER QUALITY CONSTITUENTS

Chemical or Physical Constituent	Minimum	Maximum
1. pH	7.2	8.0
2. Water Clarity (safety)	main drain visible at all times	—
3. Turbidity (shielding microorganisms from disinfection)	—	0.5* T.U.
4. Cyanuric acid or its derivatives (if used)	0	90 mg/l
5. Temperature		104°F.

Note: * In peak use periods, turbidity may increase to 1.0 T.U. provided it returns to 0.5 T.U. within a six-hour period after peak use. Turbidity is not a required routine analysis which must be performed by the RWCF. Turbidity monitoring may be required by the department or local health officer if special conditions warrant it.

TABLE 3
RANGE OF ACCEPTABLE TESTING LEVELS*

Chemical Test	Minimum Range	Minimum Accuracy
1. Free available chlorine	0.3 to 3.0 mg/l	0.2 mg/l
2. Total chlorine	0.3 to 3.0 mg/l	0.2 mg/l
3. Total bromine	0.3 to 3.0 mg/l	0.2 mg/l
4. pH	7.0 to 8.2	0.2
5. Cyanuric acid	0 to 100 mg/l	5 mg/l
6. Alkalinity	0 to 300 mg/l	15 mg/l

Note: * Do not make determinations of chemical conditions based on readings at the extreme measurable limits of the scale.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-262-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-060, filed 6/22/88.]

WAC 246-262-060 General design, construction, and equipment. (1) Owners shall locate RWCFs to:

(a) Minimize pollution by dust, smoke, soot, and other undesirable substances;

(b) Eliminate pollution from surrounding surface drainage; and

(2003 Ed.)

(c) Ensure pools within the RWCF are more than fifteen feet from any structure, object, or land formation (i.e., pump-house, tree, etc.), which would provide a user with the opportunity to jump from such a structure into the pool. This does not include any barriers provided to prevent unauthorized access to pool or segments of attractions which enter pool.

(2) Owners shall use only materials in the structure and equipment which are nontoxic, durable, inert, impervious to water, and easily cleaned.

(3) Owners shall design and maintain walking surfaces which are:

(a) Sloped a minimum one-fourth inch per foot;

(b) Of a nonslip finish;

(c) Equipped with sufficient drains to prevent standing water;

(d) Free of resilient coverings, e.g., carpeting; and

(e) At least four feet in width.

(4) Owners shall provide adequate barrier protection to prevent unauthorized access including:

(a) In outdoor facilities, a barrier six feet or more in height with:

(i) Openings, holes, or gaps not to exceed four inches except openings protected by gates or doors; and

(ii) Lockable gates and entrances either regulated during periods of use or provided with a self-closing, self-latching mechanism a minimum of forty-two inches from the ground.

(b) In indoor facilities, suitable barriers to prevent access by unauthorized individuals or pool access by unattended small children.

(5) Owners shall ensure that pools:

(a) Comply with all provisions of chapter 246-260 WAC where pool facilities are a separate attraction;

(b) Have surfaces with:

(i) Materials complying with subsection (2) of this section;

(ii) Watertight and nonabrasive construction;

(iii) Nonslip finish where users are walking; and

(iv) White or light color finish not obscuring the view of objects or surfaces.

(c) Are dimensionally designed to provide for the safety of the user and circulation of the water including, but not limited to:

(i) Absence of protrusions, extensions, means of entanglement, or other obstruction which can cause entrapment or injury;

(ii) Construction tolerances conforming with current ANSI public pool standards;

(iii) Uniform pool floor slopes as follows:

(A) Not exceeding one foot of drop in seven feet of run for pools serving as landing or exiting pools, where total water depth is less than forty-eight inches; and

(B) Providing a maximum slope of one foot of drop in twelve feet of run up to a depth of five and one-half feet in pools where users enter and participate in extended activities.

(iv) Vertical walls for a minimum distance noted in Table 4 of this section, which may be curved (not to exceed allowable radius) to join the floor.

(A) Vertical means walls not greater than eleven degrees from plumb.

(B) Coving or portion of the side wall of a diving area in the pool shall conform as described in subsection (5)(c)(vi) of this section.

(C) In new construction or alterations to existing construction, ledges are prohibited.

(D) Requirements in subsection (5)(c) of this section do not apply to spas.

(v) A maximum intrusion beyond the vertical (as defined in subsection (5)(c)(iv)(A) of this section) with any configuration not to exceed a transitional radius from wall to floor where floor slopes join walls and which:

(A) Has its center of radius no less than the minimum vertical depth specified in Table 4 of this section below the water level;

(B) Has arc of radius tangent to the wall; and

(C) Has a maximum radius of coving (or any intrusion into the pool wall/floor interface) determined by subtracting the vertical wall depth from the total pool depth.

Pool Depth	20"	2'6"	3'0"	3'6"	4'0"	4'6"	5'0"	>5'0"
Minimum Slide Wall Vertical Depth	1'6"	1'10"	2'2"	2'6"	2'10"	3'2"	3'6"	>3'6"
Maximum Radius of Curvature	6"	8"	10"	12"	12"	14"	1'6"	**Maximum radius equals pool depth minus the vertical wall depth

Note: * For pool depths which fall between the depths listed, values can be interpolated.

** Radius of coving cannot intrude into pool within diving envelope or deep water entry area for attractions entering above pool water level.

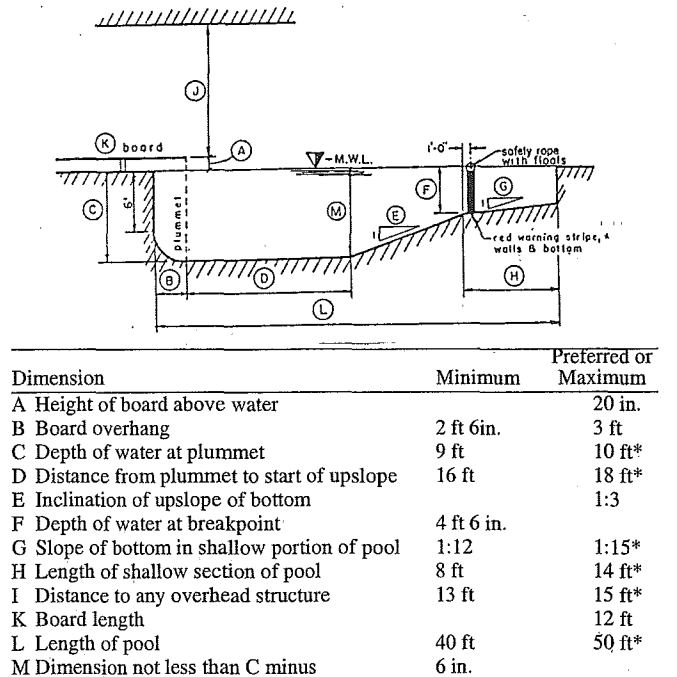
(vi) Provision of diving envelopes in pools or areas of pools designated for diving activities to include:

(A) A diving envelope of no less than the CNCA standard configuration* noted in Figure 1 of this section in areas where user would enter from deck level, diving board, or platform at a height of less than one-half meter (twenty inches).

Note: * This requirement is based on a standard described in CNCA publication "Swimming Pools: a Guide to their Planning, Design, and Operation" 1987. Fourth edition. Human Kinetics Publisher, Inc., Champaign, Illinois. Figure 8.1

FIGURE 1:

Minimum dimensions for pools with provision for diving from deck level or providing boards or platforms at a height less than one-half meter.



Note: * Values with asterisks are not to be considered as maximums.

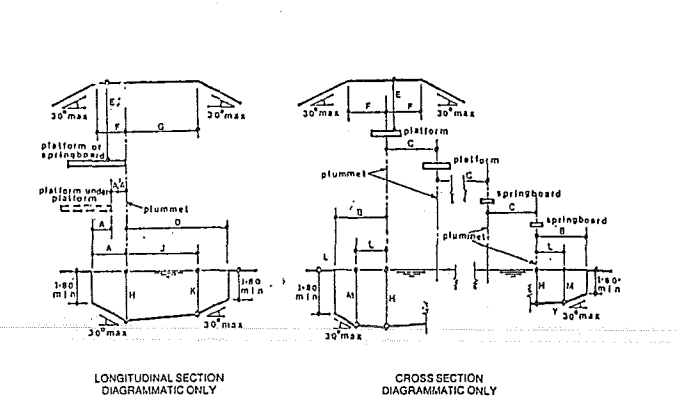
** Warning stripe at break point may be of any contrasting color.

(B) A diving envelope of no less than the FINA standard configuration** noted in Figure 2 of this section in areas where user would enter from diving board or platform at a height of one-half meter (twenty inches) or greater.

Note: ** This requirement is based on a standard described in FINA publication "FINA Handbook - 1986-1988." Constitution and rules governing swimming, diving, water polo, and synchronized swimming, 1986-1988. Edited by E. Allen Harvey, Vancouver, Canada VGN 3R6, Section D, pp. 114-115.

FIGURE 2:

Minimum dimensions for pools with boards or platforms at a height of one-half meter or more.



FINA	Dimensions		SPRINGBOARD				PLATFORM									
	are in Metres		1 Metre		3 Metres		1 Metres		3 Metres		5 Metres		7.5 Metres		10 Metres	
DIMENSIONS FOR	LENGTH		4.80		4.80		4.50		5.00		6.00		6.00		6.00	
DIVING FACILITIES	WIDTH		0.50		0.50		0.60		1.50		1.50		1.50		2.00	
Revised to 1st Jan 1987	HEIGHT		1.00		3.00		0.60-1.00		2.60-3.00		5.00		7.50		10.00	
A From plummets BACK TO POOL WALL	DESIGNATION	A-1		A-3		A-1P1		A-3P1		A-5		A-7.5		A-10		
	MINIMUM	1.80		1.80		0.75		1.25		1.25		1.50		1.50		
A/A From plummets BACK TO PLATFORM Plummet directly below	DESIGNATION									AA5/1		AA7.5/3/1		AA10/5/3/1		
	MINIMUM									1.50		1.50		1.50		
B From plummets to POOL WALL AT SIDE	DESIGNATION	B-1		B-3		B-1p1		B-3p1		B-5		B-7.5		B-10		
	MINIMUM	2.50		3.50		2.30		2.90		4.25		4.50		5.25		
C From plummets to ADJACENT PLUMMET	DESIGNATION	C-1/1		C-3/3/1		C-1/1p1		C-3/1P1/3p1		C-5/3/1		C-7.5/5/3/1		C-10/7.5/5/3		
	MINIMUM	2.40		2.60		1.65		2.10		2.50		2.50		2.75		
D From plummets to POOL WALL AHEAD	DESIGNATION	D-1		D-3		D-1p1		D-3p1		D-5		D-7.5		D-10		
	MINIMUM	9.00		10.25		8.00		9.50		10.25		11.00		13.50		
E On plummets, from BOARD TO CEILING	DESIGNATION		E-1		E-3		E-1p1		E-3p1		E-5		E-7.5		E-10	
	MINIMUM		5.00		5.00		3.50		3.50		3.50		3.50		5.00	
F CLEAR OVERHEAD behind and each side of plummets	DESIGNATION	F-1	E-1	F-3	E-3	F-1p1	E-1p1	F-3p1	E-3p1	F-5	E-5	F-7.5	E-7.5	F-10	E-10	
	MINIMUM	2.50	5.00	2.50	5.00	2.75	3.50	2.75	3.50	2.75	3.50	2.75	3.50	2.75	5.00	
G CLEAR OVERHEAD ahead of plummets	DESIGNATION	C-1	E-1	C-3	E-3	G-1p1	E-1p1	G-3p1	E-3p1	G-5	E-5	G-7.5	E-7.5	G-10	E-10	
	MINIMUM	5.00	5.00	5.00	5.00	5.00	3.50	5.00	3.50	5.00	3.50	5.00	3.50	6.00	5.00	
H DEPTH OF WATER at plummets	DESIGNATION		H-1		H-3		H-1p1		H-3p1		H-5		H-7.5		H-10	
	MINIMUM		3.50		3.80		3.30		3.60		3.80		4.50		5.00	
J DISTANCE AND DEPTH K ahead of plummets	DESIGNATION	J-1	K-1	J-3	K-3	J-1p1	K-1p1	J-3p1	K-3p1	J-5	K-5	J-7.5	K-7.5	J-10	K-10	
	MINIMUM	5.00	3.40	6.00	3.70	5.00	3.20	6.00	3.50	6.00	3.70	8.00	4.40	11.00	4.75	
L DISTANCE AND DEPTH M each side of plummets	DESIGNATION	L-1	M-1	L-3	M-3	L-1p1	M-1p1	L-3p1	M-3p1	L-5	M-5	L-7.5	M-7.5	L-10	M-10	
	MINIMUM	1.50	3.40	2.00	3.70	1.40	3.20	1.80	3.50	4.25	3.70	4.50	4.40	5.25	4.75	
N MAXIMUM SLOPE TO REDUCE DIMENSIONS beyond full require- ments	POOL DEPTH	30 degrees		NOTE												
	CEILING HT	30 degrees		Dimensions C (plummet to adjacent plummets) apply for Platform with widths as detailed. For wider Platforms increase C by half the additional width(s)												

(d) Have adequate handholds around the perimeter in pools designed for extended swimming and bathing activity and excluding wave pools; and

(e) Stairs, ladders, or stepholes with:

(i) Stairs, when provided, meeting the following construction requirements:

(A) Treads of a nonslip finish;

(B) Stair tread edges colored to contrast with the color of the pool and clearly visible to the users;

(C) Recessed in pool areas used for lap swimming or provided with wave action; and

(D) Equipped with handrails extending over the edge of the deck.

(ii) Ladders or stepholes which:

(A) Furnish exit from pools greater than four feet in depth except in landing pools bringing the user toward a shallow area after entering the water;

(B) Are spaced a minimum of one for every fifty feet of pool perimeter greater than four feet deep;

(C) Are provided at both sides of the deep end in pools over thirty feet in width; and

(D) Are equipped with a handrail at the top of both sides extending over the coping or edge of the deck.

(iii) User access at the shallow end of pool.

(6) Owners shall ensure treatment turnover at rates no less than designated as follows:

(a) In receiving pools for water slides, water tubes, inner tube rides, speed slides or tubes, drop slides or tubes, and kiddie flume slides, treatment turnover time can be based on any of the following:

(i) Total attraction volume in one-hour period;

(ii) Treatment turnover equals design peak usage (maximum users per hour) expressed in gpm;

(iii) A rate of one hour for 20,000 gallons per two or less attraction segments. Treatment turnover times may increase proportionately for larger pool volumes per two or less attraction segments;

(iv) Alternative methods where provisions to reduce contaminants are justified to the satisfaction of the department or local health officer; and

(v) Treatment turnover times not to exceed six hours.

(b) For wave pools, a minimum treatment turnover time of two hours; and

(c) For activity pools, a minimum treatment turnover time of four hours.

(7) Owners shall provide pool inlets which are:

(a) Submerged and located to produce uniform circulation of water and chemicals throughout the pool; and

(b) Located on the bottoms of pools greater than two thousand five hundred square feet, unless otherwise justified by the engineer to the satisfaction of the department or local health officer.

(8) Owners shall provide pool outlets with:

(a) Overflow and main drain with each designed to carry one hundred percent of total recirculation filter flow;

(b) Overflow outlets that have:

(i) Design to maintain a minimum of sixty percent of filter recirculation flow at all times;

(ii) An overflow channel on the pool perimeter to promote uniform circulation and skimming action of the upper water layer for pools greater than twenty-five hundred square feet, with:

(A) Design preventing matter entering channel from returning to the pool;

(B) Dimensions minimizing the hazard for bathers, such as catching arms or feet in an overflow channel;

(C) 0.01 foot slope per foot or more;

(D) Drains sufficiently spaced and sized to collect and remove overflow water to return line to filter where applicable;

(E) Size sufficient to carry one hundred percent of the recirculation flow plus the surge flow equivalent to one-fifth of the balancing tank expressed in gallons per minute.

(iii) Skimmers, when used on pools up to twenty-five hundred square feet, if:

(A) Demonstrated to operate properly under design conditions;

(B) Turbulence is not expected to interfere with operation;

(C) Maximum flow rate through skimmers does not exceed four gpm per inch of weir;

(D) Devices are recessed in the wall of the pool so that no part protrudes beyond the plane of the wall into the pool;

(E) The skimmer is equipped with a device to prevent air lock in the recirculation suction line (i.e., an equalizer line); and

(F) The skimmer is equipped with a removable and cleanable screen designed to trap large solids.

(iv) Sidewall channels, when used on pools up to twenty-five hundred square feet, which accept the total recirculation volume of the pool through the upper side of the pool if:

(A) Overall flow through the channel exceeds four times the treatment recirculation rate;

(B) Design of channel prevents entrapment of the user;

(C) Openings of any screens have less than one-half inch slots;

(D) Channel openings do not allow access beyond the pool, except with the use of specific tools requiring their opening;

(E) Open area of grates prevent a suction or entrapment hazard which could be dangerous to the user; and

(F) The channel provides an action pulling water from the top of the pool to remove floatable debris and oils.

(c) Main drains in all pools with:

(i) Location at the low points of the pool;

(ii) A minimum of two main drains spaced not further than twenty feet apart nor closer than six feet or spaced as far as possible from each other in pools less than six feet linear floor distance;

(iii) Total open area of grates preventing a suction or entrapment hazard which could be dangerous to user;

(iv) Flat grate drains having:

(A) Maximum flow of 1.5 feet per second; or

(B) Net area of outlet being at least four times the area of the discharge pipe.

(v) Maximum flow of four feet per second in anti-vortex drains;

(vi) Openings not allowing a sphere over one-half inch in diameter to pass;

(vii) Grate design to withstand forces of users;

(viii) Grates removable only with specific tools; and

(ix) Means to control flow from recirculation pump or balancing tank.

(9) Owners shall maintain recirculation flow which:

(a) Does not exceed six feet per second in suction or valved discharge side of pump; and

(b) Does not exceed ten feet per second in open discharge pipes on the pressure side of the pump or filter discharge. This limit does not apply to the return inlet and the last two feet of pipe leading to the inlet.

(10) Owners shall provide a surge chamber or surge area in RWCFs with an entry pool to:

(a) Accommodate at least two minutes of the total turn-over; and

(b) Maintain proper water levels for treatment and operation of the attraction.

(11) Owners having RWCFs with overflow channels requiring balancing tanks shall:

(a) Maintain volume equivalent to fifteen times maximum bathing load expressed in gallons; and

(b) Increase capacity as necessary to provide volume for make-up water and to prevent air lock in the pump suction line.

(12) Owners shall have and maintain recirculation pumps with adequate capacity to:

(a) Provide design flows and pressure for recirculation of the RWCF water over the entire operating pressure of the filter;

(b) Allow proper capacity for backwashing of filters when specified; and

(c) Have self-priming capability when installed above the pool water level.

(13) Where pumps precede the filter, owners shall install hair and lint strainers, which shall:

(a) Be located upstream of recirculation pumps;

(b) Be of corrosion-resistant material sufficiently strong to prevent collapse when clogged;

(c) Have an operable cover; and

(d) Provide valving to isolate the strainer when located below pool water level.

(14) Owners shall provide valves at appropriate locations to allow isolation and maintenance of equipment.

(15) Owners shall provide equipment rooms which:

(a) Enclose pumps, disinfection equipment, filters, and other electrical and mechanical equipment and associated chemicals;

(b) Provide adequate working space and access to perform routine operations;

(c) Provide lighting and ventilation of the equipment room; and

(d) Are not accessible to the public.

(16) Owners shall ensure the source of make-up water and associated piping in the RWCF:

(a) Provides sufficient quantity to replace daily losses from the pool;

(b) Comes from a supply conforming with chapter 246-290 WAC; and

(c) Prevents cross-connections using a minimum air gap of two pipe diameters or approved backflow prevention devices between the make-up water source and the RWCF attraction water or waste water.

- (17) Owners shall equip RWCFs with filtration equipment which:
- (a) Meets the applicable standards of NSF or equivalent;
 - (b) Uses acceptable types and filter rates described in Table 5 of this section:

TABLE 5
FILTER TYPES AND ACCEPTABLE RATES

Type of Filter	Range of Acceptable Filter Rate Expressed in gpm/sq. ft.		Maximum*
	Minimum	Manual feed	
Sand			
Rapid & pressure	—		3
Pressure high rate	10		18
Vacuum high rate	10		18
DE	Continuous feed	Manual feed	
Vacuum	0.8	1.0	2.0
Pressure	1.0	1.35	2.0
Cartridge**			
Applied in temperature ranges:			
<95°F.	—		0.375
>95°F.	—		0.188

Note: * Filters sized at maximum application rate shall use flow control valves.

** Cartridge filters shall have a nominal micron rating of twenty microns or less.

- (c) Has pressure or vacuum gauges for measuring loss of head (pressure) through the filter with minimum of one gauge preceding and one gauge following the filter;
- (d) Has a flow indicator to measure treatment turnover; and
- (e) Has means of discharging filter backwash to waste with:
 - (i) Discharge in a manner not creating a public nuisance;
 - (ii) Disposal in accordance with applicable local law or regulation;
 - (iii) Minimum air gap of two pipe diameters to prevent cross-connection from waste discharge and recirculation system piping;
 - (iv) Discharge receptor and piping of sufficient size to accept backwash water and prevent flooding; and
 - (v) Provisions to monitor filter effluent during backwash.
- (18) Owners shall provide disinfection equipment which:
 - (a) Provides a continuous and effective residual of disinfectant in the water;
 - (b) Uses a disinfectant with a residual that is easily monitored;
 - (c) Conforms with NSF standards when liquid or solid feed materials are used;
 - (d) Has a design feed rate which will provide effective disinfection levels when RWCFs are in use;
 - (e) Meets the following conditions if chlorine gas is used:
 - (i) Chlorine rooms shall:
 - (A) Be above ground level;
 - (B) Be constructed so all openings or partitions with adjoining rooms are sealed;

- (C) Be located with consideration of prevailing winds to dissipate leaked chlorine away from the RWCF;
- (D) Have door opening outward only and to the out-of-doors.
- (ii) Mechanical exhaust ventilation of the chlorine room including:
 - (A) Air inlet located as far as possible from fan intake to promote good air circulation patterns;
 - (B) Minimum of one air change per minute in the chlorine room when fan is operating;
 - (C) A remote switch outside the room or a door-activated switch to turn on fan prior to entering;
 - (D) Suction for fan near the floor; and
 - (E) Exhaust for fan and chlorinator vent located to prevent contaminating air intakes or prevent undue hazard for the users of the RWCF.
- (iii) Gas chlorine systems which:
 - (A) Are vacuum injection type, with vacuum actuated cylinder regulators; and
 - (B) Provide adequate-sized backflow and anti-siphon protection at the ejector.
- (iv) Breathing protection available in an accessible area for the operator outside of the chlorine room including:
 - (A) Instructions about limitations with chlorine concentrations and concentrations of oxygen if chlorine-type canister masks are used; and
 - (B) Self-contained breathing apparatus designed for use in a chlorine atmosphere as preferred equipment for working with chlorine leaks.
- (v) Means for automatic shutoff when the recirculation filter pump is off or flow to the pool is interrupted;
- (vi) Chlorine gas cylinders shall:
 - (A) Be stored only in chlorine rooms; and
 - (B) Not exceed one hundred fifty pounds tare weight per cylinder; except, wave pools, where one-ton cylinders may be used. Only a single, one-ton cylinder shall be stored on the premise at any time.
- (19) Owners applying chemicals other than disinfectant shall provide chemical feed equipment with:
 - (a) Adequate size and design to allow routine cleaning and maintenance;
 - (b) Materials resistant to action of the chemicals to be used; and
 - (c) Means for automatic shut off when the recirculation filter pump is off or flow to the pool is interrupted.
- (20) Owners shall have testing equipment to provide means for measuring disinfectant residuals, pH, alkalinity, and any other chemicals used routinely in the RWCF water. In pools where compressed chlorine gas is used, means to detect leaks shall be provided, i.e., use of proper strength ammonia vapor.
- (21) Owners shall provide easily accessible change room facilities at all RWCFs with:
 - (a) Dressing rooms, showers, toilets, urinals, and sinks;
 - (b) Change room design including:
 - (i) Separate facilities for both sexes;
 - (ii) Floors of a nonslip finish with suitable drains;
 - (iii) Junctions between walls and floors coved for ease of cleaning;

- (iv) Adequate ventilation to prevent build-up of moisture in the facility; and
- (v) Provisions to minimize cross traffic with nonusers.
- (c) Plumbing fixtures as described in Table 6 of this section.

TABLE 6
MINIMUM PLUMBING FIXTURE REQUIREMENTS
BASED ON MAXIMUM PEAK PERIOD OCCUPANCY

Type of Fixture	Occupancy/Sex	Number of Fixtures Required Per Occupancy Load	
		Male	Female
1. Toilets	First 600	1/200	1/100
	Portion exceeding 600	1/450	1/300
2. Urinals	First 600	1/200	-
	Portion exceeding 600	1/450	-
3. Showers	First 300	1/100	1/100
	Portion exceeding 300	1/200	1/200
4. Sinks	First 400	1/200	1/200
	Next 350	1/350	1/350
	Portion exceeding 750	1/500	1/500
5. Hose bibs		1 accessible to change rooms	
6. Janitor sink		1 within the RWCF	

- (d) Showers:
 - (i) Delivering water at a temperature range between ninety and one hundred ten degrees Fahrenheit; and
 - (ii) Providing liquid or powdered soap in nonglass dispensers.
- (e) Flush toilets and toilet tissue in dispensers;
- (f) Sinks providing:
 - (i) Tempered or hot and cold running water,
 - (ii) Liquid or powdered soap in nonglass dispensers, and
 - (iii) Disposable towels or electric hand dryers.
- (g) Sewage disposed of in a manner approved by the department or local health officer; and
- (h) Hose bibs with vacuum breakers provided at convenient locations.
- (22) Owners shall design and maintain lighting at RWCF attractions or change rooms to:
 - (a) Illuminate indoor attractions, outdoor attractions used after dusk, or change rooms with a minimum lighting intensity maintained thirty inches above any walking surface, pool deck, or pool area of:
 - (i) Thirty foot-candles at indoor facilities;
 - (ii) Fifteen foot-candles at outdoor facilities; or
 - (iii) Twenty foot-candles in change rooms.
 - (b) Allow lifeguards or attendants to clearly see every part of pool waters and walking surfaces; and
 - (c) Meet any additional lighting requirements deemed necessary by the department or local health officer.
- (23) Owners shall provide first aid facilities in every RWCF including:
 - (a) A twenty-four package first aid kit per WAC 296-24-065;
 - (b) Two or more blankets reserved for emergency use;
 - (c) A telephone with a prominently displayed list of emergency medical service response numbers;

- (d) A backboard meeting the specifications of the ARC; and
- (e) Sufficient and suitable area to accommodate persons requiring treatment and necessary first aid equipment.

(24) Owners shall provide signs at RWCF entrances and change rooms. Any combination of words, pictures, or symbols may be used to convey the following conditions:

- (a) Prohibition of use by persons with communicable diseases;
- (b) Prohibition of use by persons under the influence of alcohol or drugs;
- (c) Requirement for a cleansing shower before entering the attractions;
- (d) Warning that persons refusing to obey the attendants are subject to removal from the premises; and
- (e) Prohibition of food and drink in pool, change room, or on walking surfaces.

- (25) If owners allow or make provision for food service:
 - (a) Food and beverage sale and consumption areas shall be separate from pool, change room, and walking surfaces;
 - (b) Trash containers shall be provided; and
 - (c) No glass containers shall be allowed in the RWCF.
- (26) Owners shall prevent users or spectators access to mechanical, electrical, or chemical equipment facilities.
- (27) Owners shall provide an operable drinking fountain of the angle jet type design meeting the requirements of the American Standards Association.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-060, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-070, filed 6/22/88.]

WAC 246-262-070 Specific design, construction, and equipment. (1) Owners shall provide specific design, construction, and equipment for the various types of RWCF attractions.

- (2) Owners and manufacturers shall ensure adherence to recognized design and construction standards including, but not limited to:
 - (a) ASTM F-24 Standards on Amusement Rides and Devices;
 - (b) "Suggested Health and Safety Guidelines for Recreational Water Slide Flumes" U.S. Department of Health and Human Services, Centers for Disease Control, Atlanta, Georgia, 30333;
 - (c) "World Waterpark Association Considerations for Operating Safety" published by the World Waterpark Association, 7474 Village Drive, Prairie Village, Kansas, 66208; and
 - (d) Department recognized or approved guidelines, criteria, or standards.
- (3) Owners shall ensure design and construction for water slides or tubes, inner-tube rides, kiddie flumes, or ramp slides meet the following minimum standards:
 - (a) Flume or tube entry access points shall have:
 - (i) Means to control unauthorized entrance;
 - (ii) Handrails or slip-resistant surfaces provided to assist users; and
 - (iii) Attendant stations which provide:

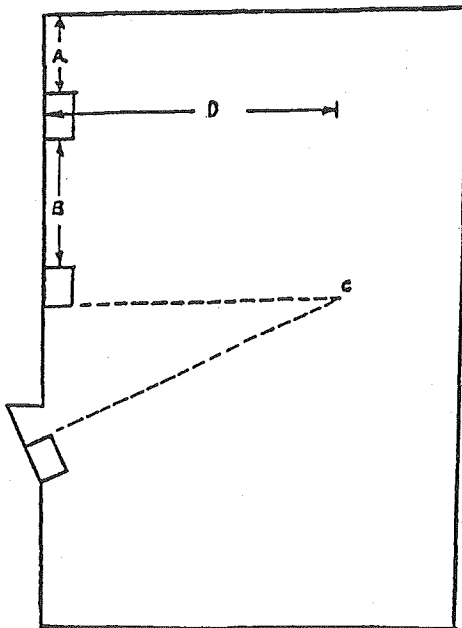
- (A) User entry spacing control;
- (B) Attendant line of sight to the attraction; and
- (C) Attendant access to a communication system.

(b) Receiving pools shall have:

- (i) Clearances and minimum distances as noted in Figure 3 of this section for tube or flume entrances into pools.

FIGURE 3
MINIMUM CLEARANCES FOR FLUME OR TUBE ENTRY TO RECEIVING POOLS

MINIMUM VALUE	DISTANCE	DESCRIPTION
A	5 feet	Minimum distance from edge of flume to side of pool.
B	6 feet	Minimum distance between sides of parallel flumes.
C	20 feet	Minimum distance between two flumes or tubes that are not parallel shall be so constructed so that the intersecting lines of each closest side does not intersect for a distance of at least twenty feet from the end of each flume.
D	20 feet	Minimum distance where flume terminates to opposite side of pool.



- (ii) Flume or tube sliding surface ending below the pool operating water level when users ride unaided or on mats;
- (iii) Flume or tube perpendicular for a minimum of ten feet to the wall of entry;
- (iv) Handrails, when steps are provided for exiting; and
- (v) Attendant and/or lifeguard stations with:
 - (A) Unobstructed access to users; and
 - (B) Ready access to communication system for contacting control station attendant and first aid personnel.
- (4) Owners shall design and construct barriers to prevent unauthorized entry or exit from any intermediate pool.
- (5) Owners shall ensure design and construction of speed slides meet the following minimum standards:
 - (a) Entry points conforming with subsection (3)(a) of this section;
 - (b) Roller- or sled-type slides designed to prevent accidental flipping of the sleds or coasters when entering the water;

(2003 Ed.)

- (c) Provision of sufficient transition zones for deceleration preventing unsafe user impact; and

(d) Maintenance of critical water operation levels providing proper braking action of the user.

(6) Owners shall ensure design and construction of wave pools meet the following minimum standards:

(a) Walls of wave pools shall be vertical with minimum six inch radius of curvature between wall and pool bottom;

(b) Pool bottom sloped:

(i) Not exceeding one foot of drop in twelve feet of run where pool depths range from zero to three and one-half feet; or

(ii) Not exceeding one foot of drop in nine feet of run where depths range from three and one-half feet to six and one-half feet.

(c) Recessed ladders or step holes with vertical grab bars at depths above three and one-half feet:

(i) For emergency exit only;

(ii) Spaced at intervals of fifty feet or less where pool water depths are greater than three and one-half feet. Pool water depths are measured without wave action.

(d) Deck width of at least ten feet along the shallow end;

(e) A fence or restrictive barrier a minimum of forty-two inches in height and at least two feet out from the pool/deck interface at the side walls of wave pools, with emergency exit openings.

(f) Lifeguard station locations appropriate to prevailing conditions;

(g) A push-button system to shut off the wave-making equipment with:

(i) Shut offs installed on sidewall decks and spaced at intervals no greater than one hundred feet, readily accessible to the lifeguards; and

(ii) Shock hazard protection.

(h) A communication system for use by authorized personnel which is clearly audible to all portions of the pool;

(i) A communication system for interaction between authorized personnel; and

(j) Maximum bathing load (users) not to exceed a value equal to $S/12 + D/68$ where:

(i) "S" equals surface area in square feet where depth is less than three and one-half feet;

(ii) "D" equals surface area in square feet where pool depth is three and one-half feet deep or greater; and

(iii) Pool depths are measured without wave action.

(7) If inner tubes, boogie boards, or surf boards are used, the owner shall ensure the design and operation of the wave pool provides for such activity, including:

(a) The establishment of rules for use;

(b) Operating and emergency procedures; and

(c) Crowd control.

(8) Owners shall ensure design and construction of any wading activity pool meets the following minimum standards. Wading activity pool areas are:

(a) Built with maximum water depth of two feet;

(b) Constructed with pool walls so that distance from deck to water level is six inches or less for at least seventy-five percent of the pool perimeter;

(c) Equipped with floors uniformly sloped to drain with a maximum slope of one foot of drop in twelve feet of run;

(d) Separated by at least a four foot high barrier when distance to any water area greater than four feet in depth is less than ten feet; and

(e) Protected from water areas greater than two feet by providing:

(i) A float line separating the two areas;

(ii) A six inch contrasting color line on pool bottom and side walls at float line; and

(iii) A transition zone with a maximum floor slope not exceeding one foot of drop in twelve feet of run.

(9) Owners shall ensure design and construction of drop slides or drop tubes meet the following minimum standards:

(a) Entry in accordance with subsection (3)(a) of this section;

(b) Receiving pool envelope:

(i) Conforming to CNCA standards noted in WAC 246-262-060 (5)(c)(vi)(A) if the point of exit is less than one-half meter (or twenty inches);

(ii) Conforming to FINA standards noted in WAC 246-262-060 (5)(c)(vi)(B) if the point of exit is one-half meter (or twenty inches) or greater.

(iii) Increasing in size to ensure user safety if warranted by angle of entry or speed of the user.

(c) Sufficient distance between slides or tubes to prevent collisions of users. Parallel exits are recommended.

(d) Direct line of sight and direct communication between entry access point and receiving pool.

(10) Owners shall provide signs for specific RWCF attractions. Words, pictures, or symbols may be used to convey the following as appropriate:

(a) Prohibition of running, standing, kneeling, tumbling, horseplay, or stopping in the flumes or tubes;

(b) Failure to follow directions of attendant or failure to obey posted rules may result in removal from the RWCF;

(c) Prohibition of diving from flume;

(d) Prohibition of multiple user chains if applicable to ride;

(e) Requirement to leave the landing area promptly after exiting;

(f) Recommended minimum or maximum age or height for using this attraction; and

(g) Prohibition of head first sliding if applicable to ride.

(h) Additional information on wave pools including:

(i) Warning that wave pools can be very tiring;

(ii) Warning for small children and poor swimmers to use personal flotation devices in designated areas;

(iii) Requirement for adult supervision for children;

(iv) Prohibition of diving, jumping, or entering from sides of pool; and

(v) Prohibition of using surf boards during periods of general public use.

(11) If the proposed attraction design is not addressed by or exceeds limitations of standards and guidelines specified by this section, owners shall submit:

(a) Justification to the department or local health officer prepared by an engineer; and

(b) Information on the construction, maintenance, and operation of the proposed attraction.

[Statutory Authority: RCW 70.90.120, 92-02-020 (Order 226B), § 246-262-070, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050.]

[Title 246 WAC—p. 500]

91-02-051 (Order 124B), recodified as § 246-262-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120, 88-13-125 (Order 311), § 248-97-080, filed 6/22/88.]

WAC 246-262-080 Operation. (1) Owners shall ensure proper operation to protect the public health and safety of the users and the water quality of the RWCF.

(2) Owners shall prepare and use an operations manual for the RWCF.

(3) Owners shall routinely inspect, maintain, and repair the physical components to:

(a) Ensure all structural facilities are intact and free from corrosion, wear, or stress;

(b) Prevent water ponding on walking surfaces;

(c) Ensure equipment is available and operable including:

(i) Disinfection, filtration, and related equipment;

(ii) Lifesaving equipment; and

(iii) Communication systems.

(4) Owners shall ensure user health and safety by adequately staffing the RWCF during operation. Staffing shall include:

(a) Advanced first aid personnel at all times facility is open to the public;

(b) Lifeguards and/or attendants as appropriate at all times facility is open to the public; and

(c) Water treatment operator as needed.

(5) Owners shall ensure each type of personnel performs the following duties:

(a) Advanced first aid personnel shall provide emergency medical treatment;

(b) Lifeguard shall have sole responsibility for guarding users in area assigned;

(c) Attendants shall have sole responsibility for assuring proper user control in areas assigned; and

(d) Water treatment operator shall oversee water treatment operations and conduct necessary water quality monitoring.

(6) Owners shall ensure each type of personnel meets the designated training requirements:

(a) Advanced first aid personnel with:

(i) A current advanced first aid certification or equivalent or higher levels of training including:

(A) First responder;

(B) Emergency medical technician; or

(C) Paramedic.

(ii) Training on management of spinal injuries in the aquatic environment if lifeguards with lifeguard training are not at the RWCF.

(b) Lifeguards with a current lifeguard certificate through any of the recognized programs in the definition (WAC 246-262-010(23));

(c) Attendants with training determined appropriate by the owner to respond to user safety needs at the attractions, and:

(i) Attendants stationed at shallow pool facilities (less than four feet water depth) with documented training regarding their response in at least the following:

(A) Safety instruction on basic methods of water rescue, reaching, and extension assists;

(2003 Ed.)

(B) Cardiopulmonary resuscitation (CPR) and airway management;

(C) Basic bleeding control;

(D) Basic fracture management; and

(E) Specific instruction on management of spinal injuries related to the aquatic environment.

(ii) Attendants stationed at entry access areas with basic training including:

(A) Controlling and supervising users in areas where attendant is responsible;

(B) Controlling timing of user entry rate where appropriate;

(C) Use of communication systems; and

(D) Knowledge of CPR by at least one attendant on duty.

(d) Water treatment operators knowledgeable in pool water chemistry, filters, and pumping equipment; and

(e) When gas chlorine is used, the manager or the operator with specific training in:

(i) Proper operation and maintenance procedures of the chlorination equipment;

(ii) Physical and chemical properties of chlorine gas under pressure;

(iii) Use of emergency safety equipment; and

(iv) Proper first aid procedures and response for accidental inhalation of chlorine gas and leaks.

(7) Owners shall ensure adequate emergency response with:

(a) Lifeguards (and attendants where appropriate) located to provide a response time not to exceed thirty seconds to all users in pools;

(b) Backup lifeguard (or attendant where appropriate) provisions so response time is maintained during multiple rescues;

(c) Lifeguards at all pools. Attendants may substitute for lifeguards at pools less than four feet in depth which:

(i) Are strictly used as receiving pools for attractions where users leave the pool immediately after entering; or

(ii) Are strictly used for wading activity; and

(iii) Attendants meet the training requirements specified in subsection (6)(c)(i) of this section.

(d) Provisions for emergency response drills to meet the response time and actions noted in WAC 246-262-080 including:

(i) Drills at least twice each operating season; and

(ii) Documentation of testing.

(8) Owners shall regulate activities of users and spectators including:

(a) Requirement to obey RWCF rules related to health and safety; and

(b) Warning that failure to comply with rules constitutes grounds for exclusion from the premises or management action as necessary.

(9) Owners shall ensure RWCF user control in specific attractions by requiring:

(a) On speed slides, completion of the ride by one user before allowing another user to enter;

(b) On ramp slides, clearing of the slide by one group prior to second group entering; and

(c) On drop slide or tube, clearing of the pool entry area prior to allowing another user to enter.

(2003 Ed.)

(10) Owners shall monitor various environmental conditions which affect facility safety. Weather conditions, including electrical storms, fog, wind, sun glare creating visibility problems, and other such factors shall be evaluated. Appropriate action shall be taken in response to these factors to ensure user safety.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-080, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-090, filed 6/22/88.]

WAC 246-262-090 Monitoring, reporting, and recordkeeping. (1) Owners shall:

(a) Provide information requested by the department or local health officer for statewide injury and illness surveillance reports; and

(b) Notify the department or local health officer within forty-eight hours of any drowning, near drowning, death, or serious injury or illness occurring at the RWCF.

(2) Owners shall monitor and maintain records on the following for at least three years:

(a) Water quality conditions including:

(i) Testing for residual disinfectant concentration three or more different periods daily, except once a day if electronic monitoring and control equipment is provided;

(ii) Hydrogen ion (pH) concentration tested daily;

(iii) Alkalinity monitored at least weekly;

(iv) Any other chemical added to water including alum, algicides, cyanurate compounds, acid, and alkalinity compounds, etc.;

(v) Pressure or vacuum gauge readings; and

(vi) Any gross contamination to the water (i.e., vomiting, feces, etc.).

(b) Routine preventive maintenance provided on all hazardous equipment, e.g., gas chlorination equipment;

(c) Number of users of the facility; and

(d) Credentials, training, and/or certifications required for personnel per WAC 246-262-080 of this chapter.

(3) Owners shall notify the department in the event an incident occurs with a chemical creating a problem of health or safety significance (e.g., chlorine gas leak).

(4) Owners shall make records available for department review upon request.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-090, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-100, filed 6/22/88.]

WAC 246-262-100 Inspection. (1) Owners shall permit the department or local health officer to perform on-site inspections as necessary in the discretion of the enforcing agency to ensure compliance with standards in chapter 70.90 RCW and chapter 246-262 WAC.

(2) Employees of the enforcing agency shall provide appropriate identification when entering for purpose of routine inspections.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-100, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-100, filed 12/27/90, effective 1/31/91.]

tive 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-110, filed 6/22/88.]

WAC 246-262-110 Advisory committee. The RWCF advisory committee shall:

- (1) Perform functions as specified in accordance with RCW 70.90.130;
- (2) Meet at least one time each year;
- (3) Be composed of representatives as specified in RCW 70.90.130 appointed to staggered two-year terms, the representative from the department shall not be subject to these conditions;
- (4) Select a chairperson every two years;
- (5) Establish department representative as ongoing secretary of the advisory committee; and
- (6) Present an annual report to the board summarizing committee activities.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-120, filed 6/22/88.]

WAC 246-262-120 Enforcement. (1) The department or, if enforcement responsibility has been assigned under a joint plan of operation, the local health officer:

- (a) Shall enforce the rules of chapter 246-262 WAC; or
- (b) May refer cases within their jurisdiction to the local prosecutor's office or office of the attorney general, as appropriate.

(2) When a RWCF is in violation of provisions of chapter 70.90 RCW or the rules of chapter 246-262 WAC, appropriate enforcement action may be initiated by the department, local health officer, local prosecutor's office, or office of the attorney general. Enforcement actions may include any one or a combination of the following:

- (a) Informal administrative conferences, convened at the request of the department, local health officer, or owner, to expose facts and resolve problems;
- (b) Orders directed to the owner and/or operator of the RWCF and/or the person causing or responsible for the violation of the rules of chapter 246-262 WAC;
- (c) Imposition of civil penalties of up to five hundred dollars per violation per day as authorized under RCW 70.90.200;
- (d) Denial, suspension, or revocation of operating permits; and
- (e) Civil or criminal action initiated by the local prosecutor's office or by the office of the attorney general.

(3) Orders authorized under this section include, but are not limited to, the following:

- (a) Orders requiring corrective measures necessary to effect compliance with chapter 246-262 WAC or chapter 70.90 RCW. Such orders may or may not include a compliance schedule; and
- (b) Orders to stop work and/or refrain from using any RWCF or portion thereof or improvement thereto until all permits, certifications, and approvals required by statute or rule are obtained.

(4) An order issued under this section shall:

- (a) Be in writing;

(b) Name the facility and the person or persons to whom the order is directed;

(c) Briefly describe each action or inaction constituting a violation of chapter 70.90 RCW or the rules of chapter 246-262 WAC;

(d) Specify any required corrective action or forbearance together with a schedule for completing such corrective action, if applicable;

(e) Provide notice, as appropriate, that continued or repeated violation may subject the violator to:

- (i) Civil penalties of up to five hundred dollars;
- (ii) Denial, suspension, or revocation of the facilities operating permit; or
- (iii) Referral to the office of the county prosecutor or attorney general.

(f) Provide the name, business address, and phone number of an appropriate staff person who may be contacted in regard to an order.

(5) Service of an order shall be made:

- (a) Personally, unless otherwise provided by law; or
- (b) By certified mail return receipt requested.

(6) Under such rules or policies as the department or local health officer may adopt, civil penalties of up to five hundred dollars per violation per day may be assessed against any person violating the provisions of chapter 70.90 RCW or chapter 246-262 WAC.

(7) The department or local health officer shall have cause to deny the application or reapplication for an operating permit or to revoke or suspend a required operating permit of any person who has:

(a) Previously had:

- (i) An operating permit suspended or revoked; or
- (ii) An application for an operating permit denied for any reason whether in this state or any other state.

(b) Failed or refused to comply with the provisions of chapter 70.90 RCW, chapter 246-262 WAC, or any other statutory provision or rule regulating the construction or operation of a RWCF; or

(c) Obtained or attempted to obtain an operating permit or any other required certificate or approval by fraudulent means or misrepresentation.

(8) For the purposes of subsection (7) of this section, a person shall be defined to include:

- (a) Applicant;
- (b) Reapplicant;
- (c) Permit holder; or
- (d) Any individual associated with subsection (8)(a), (b), or (c) of this section including, but not limited to:
 - (i) Board members,
 - (ii) Officers,
 - (iii) Managers,
 - (iv) Partners,
 - (v) Association members,
 - (vi) Employees,
 - (vii) Agents, and in addition
 - (viii) Third persons acting with the knowledge of such persons.

(9) The department or local health officer may summarily suspend an operating permit, other required permit,

license, or certification without a prior hearing if the department or local health officer:

(a) Finds that public health, safety, or welfare imperatively requires emergency action; and

(b) Incorporates a finding to that effect in its notice or order.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-120, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-120, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW and RCW 70.90.120. 90-06-049 (Order 040), § 248-97-130, filed 3/2/90, effective 3/2/90. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-130, filed 6/22/88.]

WAC 246-262-130 Notice of decision—Adjudicative proceeding. (1) A hearing requested to contest a local health officer's action shall be governed by the local health jurisdiction's rules for hearings.

(2)(a) The department's notice of a denial, suspension, modification, or revocation of a license shall be consistent with section 377, chapter 3, Laws of 1991. An applicant or license holder has the right to an adjudicative proceeding to contest the decision.

(b) A department notice of imposition of a civil fine shall be consistent with section 378, chapter 3, Laws of 1991. A person the department imposes a civil fine on has the right to an adjudicative proceeding to contest the decision.

(c) A license applicant or holder or a person the department imposes a fine on contesting a department decision shall within twenty-eight days of receipt of the decision:

(i) File a written application for an adjudicative proceeding by a method showing proof of receipt with the Administrative Hearings Unit, Department of Health, 1300 Quince Street, S.E., Mailstop: EY-17, Olympia, WA 98504; and

(ii) Include in or with the application:

(A) A specific statement of the issue or issues and law involved;

(B) The grounds for contesting the department decision; and

(C) A copy of the contested department decision.

(d) The proceeding is governed by the Administrative Procedure Act (chapter 34.05 RCW), this chapter, and chapter 246-08 WAC. If a provision in this chapter conflicts with chapter 246-08 WAC, the provision in this chapter governs.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-130, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-130, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW and RCW 70.90.120. 90-06-049 (Order 040), § 248-97-135, filed 3/2/90, effective 3/2/90.]

WAC 246-262-140 Insurance. (1) As a condition of obtaining and maintaining a valid operating permit, owners shall provide evidence of having liability insurance.

(2) The minimum amount of liability insurance required shall be one hundred thousand dollars combined single limit. The coverage for this insurance shall include:

(a) Bodily injury or death of one or more persons in any one incident from the use of the RWCF.

(b) Tail coverage shall be required twenty-four months beyond the insured period on a "claims made" form of insurance.

(2003 Ed.)

(3) A certificate of insurance shall be provided to the department or local health officer at the time of application for operating permit subject to the approval of the risk manager of the state of Washington.

(4) The liability insurance company shall provide the department or local health officer a thirty-day prior notice of cancellation, alteration, or nonrenewal. This condition shall be stated in the certificate.

(5) If the owner's insurance is cancelled, the operating permit is void and the owner shall cease operation of the RWCF until required insurance is obtained and a valid operating permit is reinstated by the department or local health officer.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-140, filed 6/22/88.]

WAC 246-262-150 Compliance. Existing RWCFs not complying with the design, construction, and equipment requirements outlined in WAC 246-202-060 and 246-262-070 of these regulations may continue in use, provided the facility is operated in continuous compliance of the safety, sanitation, and water quality provisions of chapter 246-292 WAC as outlined in WAC 246-262-050, 246-262-080, 246-262-090, and 246-262-140.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-150, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-150, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-150, filed 6/22/88.]

WAC 246-262-160 Variance. The board may grant a variance from requirements of chapter 246-262 WAC if, in the sole discretion of the board, data and/or research provides sufficient evidence that the RWCF (attraction, device, equipment, procedure, etc.), will adequately protect public health and safety, as well as water quality.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-160, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-160, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-160, filed 6/22/88.]

WAC 246-262-170 Innovations—Substitutions. The board authorizes the department:

(1) To review new innovations, and if accepted for use, prepare appropriate amendments to chapter 246-262 WAC.

(2) To allow substitution of equipment, facilities, or procedures required by chapter 246-262 WAC when, in the sole discretion of the department, data and/or research provide sufficient evidence that such substitution is equivalent to the requirement and will adequately provide for the protection of the public health and safety of persons using the RWCF.

[Statutory Authority: RCW 70.90.120. 92-02-020 (Order 226B), § 246-262-170, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-262-170, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.90.120. 88-13-125 (Order 311), § 248-97-170, filed 6/22/88.]

WAC 246-262-990 Fees. (1) The fee for plan review of a new recreational water contact facility containing a single

attraction shall be two hundred dollars plus the safety engineer reviewer's cost as billed.

(2) The fee for plan review of a new recreational water contact facility containing more than one attraction shall be two hundred dollars plus the cost of the safety engineer reviewer's cost as billed plus seventy-five dollars for each attraction.

(3) The fee for review of plans for alterations or modifications of an existing recreational water contact facility shall be the total of direct and indirect costs, not to exceed one-half of the fee for review of a new project.

(4) The annual fee for an operating permit for a recreational water contact facility containing one attraction shall be one hundred seventy-five dollars.

(5) The annual fee for an operating permit for a recreational water contact facility containing more than one attraction shall be one hundred seventy-five dollars for the first attraction plus fifty dollars for each additional attraction up to a maximum fee of three hundred twenty-five dollars.

(6) The department may charge an additional fee of fifty dollars plus associated laboratory costs for inspections beyond those provided under the annual operating permit when necessary due to violations of such items as:

(a) Noncompliance with water quality standards; and

(b) Failure to comply with operational requirements for health and safety.

[Statutory Authority: RCW 43.70.040, 91-02-050 (Order 122), § 246-262-990, filed 12/27/90, effective 1/31/91.]

Chapter 246-270 WAC

SEWER SYSTEMS—CERTIFICATION OF NECESSITY FOR WATER DISTRICT INVOLVEMENT

WAC

246-270-001	Purpose.
246-270-010	Definitions.
246-270-020	Application content.
246-270-030	Notification of interested parties.
246-270-040	Criteria for necessity.
246-270-050	Notice of decision—Adjudicative proceeding.
246-270-060	Limitation of an approval and a certification of necessity.
246-270-990	Fees.

WAC 246-270-001 Purpose. This regulation prescribes the procedure whereby a water district organized under the provisions of chapter 57.04 RCW may apply for and receive an approval and a certification of necessity from the department in accordance with the provisions of RCW 57.08.065 in order to exercise powers of a sewer district in accordance with the provisions of Title 56 RCW, as now, or hereafter amended. Additionally, this regulation will define the criteria which the department will consider in determining the eligibility of an applicant water district for an approval and a certification of necessity.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-270-001, filed 12/27/90, effective 1/31/91; Order 6, § 248-91-020, filed 10/16/68; Emergency Order 3, § 248-91-020, filed 8/2/68.]

WAC 246-270-010 Definitions. For purposes of this chapter, the following definitions are applicable:

[Title 246 WAC—p. 504]

(1) "Approval and a certification of necessity" shall mean an order of the department which gives approval to a water district to establish, maintain, construct and operate a sewer system in a proposed service area in accordance with RCW 57.08.065.

(2) "Board" shall mean the Washington state board of health.

(3) "Department" shall mean the Washington state department of health.

(4) "Drainage basin" shall mean a geographic area drained by a surface stream or body of impounded water together with all tributary surface streams and bodies of impounded surface water.

(5) "Industrial wastes" shall mean the liquids, solids, or other wastes resulting from any process of industry, or from the development of any natural resource.

(6) "Necessity" shall mean a reasonable need and not mean an indispensable need.

(7) "Proposed service area" shall mean the area proposed to be served with a sewer system by the applicant water district.

(8) "Sewage" shall mean the water-carried waste products or discharge from human beings or other wastes from residences, public or private buildings, or industrial plants, together with such ground, surface or storm waters as may be present.

(9) "Sewer entities" shall mean any municipal or public corporations which by law are entitled to construct and operate a sewer system.

(10) "Sewer system" shall mean a system of sewers and appurtenances for the collection, transportation, treatment and disposal of sewage and industrial wastes.

[Statutory Authority: RCW 43.70.040 and 57.08.065, 92-02-018 (Order 224), § 246-270-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-270-010, filed 12/27/90, effective 1/31/91; Order 6, § 248-91-010, filed 10/16/68; Emergency Order 3, § 248-91-010, filed 8/2/68.]

WAC 246-270-020 Application content. An application for an approval and a certification of necessity must be presented to the department and shall include, but not be limited to, the following considerations:

(1) A general statement of the present and future sewage problems in the proposed area of service.

(2) A consideration of the relationship of the district to contiguous, nearby or overlapping sewer entities.

(3) Service areas considering reasonable drainage basin oriented planning.

(4) Population forecasts as a basis of sewer system design in the proposed service area.

(5) A layout map showing major trunk lines and interceptor lines including the drainage area to be served within and outside of the boundaries of the water district.

(6) The methods of interception and disposal of sewage.

(7) The projected completion time for the sewer system.

(8) An affidavit signed by an officer of the applicant water district, stating that all persons, parties or entities have been given the notice required by WAC 246-270-030.

(9) A summary setting forth the reasons why the applicant water district is better suited to provide a sewer system

(2003 Ed.)

within the proposed service area than a contiguous or adjacent sewer entity.

[Statutory Authority: RCW 43.70.040 and 57.08.065. 92-02-018 (Order 224), § 246-270-020, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-270-020, filed 12/27/90, effective 1/31/91; Order 6, § 248-91-030, filed 10/16/68; Emergency Order 3, § 248-91-030, filed 8/2/68.]

WAC 246-270-030 Notification of interested parties.

Prior to the submission of an application to the department for an approval and a certification of necessity, an applicant water district shall:

(1) Notify all the contiguous and affected sewer entities in the area in which the water district is proposing to construct and operate a sewer system that the applicant water district will submit an application for an approval and a certification of necessity, and that the department will consider all written comments and objections submitted to the department from any contiguous and affected sewer entity if the same written comments and objections are received by the department before a date which will be specified by the department.

(2) Notify the county commissioners, county health officer, county engineer, county planning commission and the county boundary review board, if any, in the county of the proposed service area, that the applicant water district will submit an application for an approval and certification of necessity and the department will consider all written comments and objections submitted to the department by any of the same if the written comments and objections are received by the department before a date which will be specified by the department.

(3) The dates for inclusion in the notification provided for in paragraphs (1) and (2) hereof will be furnished by the department upon the request of any applicant water district to the department.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-270-030, filed 12/27/90, effective 1/31/91; Order 6, § 248-91-040, filed 10/16/68; Emergency Order 3, § 248-91-040, filed 8/2/68.]

WAC 246-270-040 Criteria for necessity. The department will issue an approval and a certification of necessity to an applicant water district if all of the following conditions are satisfied:

(1) The granting of an approval and a certification of necessity will eliminate or alleviate an existing or imminent health problem as determined by the department.

(2) A sewer system does not exist in a substantial portion of the proposed service area and no regularly constituted and established sewer entity intends to construct and operate a sewer system in a substantial portion of the proposed service area within the reasonably foreseeable future.

(3) The proposed service area conforms to any or all established sewage drainage basins designated pursuant to RCW 90.48.270.

(4) The proposed service area conforms to any or all established comprehensive plans for sewage drainage basins, established pursuant to RCW 90.48.280.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-270-040, filed 12/27/90, effective 1/31/91; Order 6, § 248-91-050, filed 10/16/68; Emergency Order 3, § 248-91-050, filed 8/2/68.]

(2003 Ed.)

WAC 246-270-050 Notice of decision—Adjudicative proceeding. (1) The department's notice of a denial, suspension, modification, or revocation of an approval and certificate of necessity shall be consistent with RCW 43.70.115. An applicant or certificate holder has the right to an adjudicative proceeding to contest the decision.

(2) A certificate applicant or holder contesting a department certificate decision shall within twenty-eight days of receipt of the decision:

(a) File a written application for an adjudicative proceeding by a method showing proof of receipt with the Administrative Hearings Unit, Department of Health, 1300 Quince Street S.E., P.O. Box 47851, Olympia, WA 98504-7851; and

(b) Include in or with the application:

(i) A specific statement of the issue or issues and law involved;

(ii) The grounds for contesting the department decision; and

(iii) A copy of the contested department decision.

(3) The proceeding is governed by the Administrative Procedure Act (chapter 34.05 RCW), this chapter, and chapter 246-08 WAC. If a provision in this chapter conflicts with chapter 246-08 WAC, the provision in this chapter governs.

[Statutory Authority: RCW 43.70.040, 34.05.220 and 57.08.065. 92-02-018 (Order 224), § 246-270-050, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-270-050, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 1st ex.s. c 9 § 106. 90-06-019 (Order 039), § 248-91-060, filed 2/28/90, effective 3/1/90; Order 6, § 248-91-060, filed 10/16/68; Emergency Order 3, § 248-91-060, filed 8/2/68.]

WAC 246-270-060 Limitation of an approval and a certification of necessity. The granting of an approval and a certification of necessity by the department shall only constitute approval to establish, maintain, construct, and operate a sewer system within the proposed service area requested in the initial application for an approval and a certification of necessity, and shall in no way constitute approval or authority to establish, maintain, construct and operate a sewer system in any area which may be annexed at some future time by the applicant water district.

The granting of an approval and a certification of necessity by the department does not constitute approval of the engineering report or plans and specifications of any sewer system, and all plans and specifications and the proposed method of operation and maintenance for any sewer system must be approved by the department pursuant to WAC 246-271-050.

[Statutory Authority: RCW 43.70.040 and 57.08.065. 92-02-018 (Order 224), § 246-270-060, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-270-060, filed 12/27/90, effective 1/31/91; Order 6, § 248-91-070, filed 10/16/68.]

WAC 246-270-990 Fees. The minimum fee for required written approval and certification of necessity shall be two hundred dollars. If review time exceeds four hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-270-990, filed 12/27/90, effective 1/31/91.]

[Title 246 WAC—p. 505]

Chapter 246-271 WAC
PUBLIC SEWAGE

WAC

246-271-010	Definitions.
246-271-020	Prohibited methods of sewage disposal.
246-271-030	Investigative and order powers of secretary.
246-271-040	Plans for sewage systems.
246-271-050	Plans for sewage treatment works.
246-271-060	Plans for sewage treatment works—Requirements for engineers.
246-271-090	Operation of sewage treatment plants—Disinfection.
246-271-100	Irrigation with sewage.
246-271-110	Use of sewage sludge for fertilizer.
246-271-120	Adoption of appendix details as rules.
246-271-130	Appendix—Definitions.
246-271-140	Appendix—Report—Sewage system.
246-271-150	Appendix—General layout map.
246-271-160	Appendix—Plot plan.
246-271-170	Appendix—Engineering report—Sewage treatment works.
246-271-180	Appendix—Preliminary report, industrial waste treatment works.
246-271-990	Fees.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

246-271-070	Operation of sewage treatment plants—Efficiency. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-070, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-070, filed 12/27/90, effective 1/31/91; Regulation .92.060, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.
246-271-080	Operation of sewage treatment plants—Freedom from sand and silt. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-080, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-080, filed 12/27/90, effective 1/31/91; Regulation .92.070, effective 3/11/60.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

WAC 246-271-010 Definitions. For the purpose of these rules and regulations, the terms shall have the meaning as defined in the appendix.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-271-010, filed 12/27/90, effective 1/31/91; Regulation .92.001, effective 3/11/60.]

WAC 246-271-020 Prohibited methods of sewage disposal. No sewage or industrial waste, or components thereof, shall be placed or permitted to be placed, or permitted to flow onto the surface of the ground, or into any waters of the state in any manner determined by the secretary to be prejudicially affecting a domestic water supply, or otherwise endangering the health and well-being of the people of the state.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-020, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-020, filed 12/27/90, effective 1/31/91; Regulation .92.010, effective 3/11/60.]

WAC 246-271-030 Investigative and order powers of secretary. The secretary shall investigate the methods of sewage and industrial waste disposal and if such may endanger a domestic water supply, or in any other way endanger the health or well-being of the people of the state, the secretary shall issue and enforce such orders as may be necessary to correct the condition.

[Title 246 WAC—p. 506]

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-030, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-030, filed 12/27/90, effective 1/31/91; Regulation .92.020, effective 3/11/60.]

WAC 246-271-040 Plans for sewage systems. Report, general layout map and specifications - Every owner or authorized representative shall make a comprehensive study of the proposed sewage system and prepare and submit to the department a copy of a report, a general layout map and general construction specifications of the proposed public sewage system. Written approval of this report, general layout map and general construction specifications shall be obtained from the department before any further construction, alterations or additions are made to the system or, in case of a new system, before such system is constructed except as provided in subsection (1) of this section. After such approval has been received the owner shall not be required to submit any further plans and specifications for any part of the sewage system covered by the general layout map except as required by subsections (2), (3), and (4) of this section, but the owner shall notify the department of any portion of the system to be constructed and indicate its position on the approved general layout map. (The specifications may be submitted at the time of notification of construction.) The report and general layout map shall include but not be limited to the items listed under those headings in the appendix.

(1) In lieu of an approved report, general layout map, and specifications, any owner or authorized representative shall submit a copy of a report, a plot plan, and specifications of each new sewage system or alterations or additions to any existing sewage system and receive written approval before construction is started. The report and plot plan shall include but not be limited to those items listed in the appendix.

(2) Whether or not a report and general layout map have been approved, if the system does not include adequate sewage treatment works as determined by the department, written approval for the construction of each addition or alteration of the sewage system must be obtained from the department before construction is started.

(3) In case an addition is to be made to a sewage system and this addition is not a part of an approved general layout map, the owner shall submit a copy of a revised general layout map or a plot plan of the area to the department and receive written approval before construction is started.

(4) Every owner shall submit a set of detailed plans and specifications of all overflow or bypass structures, pipe outlets and pumping stations with overflow structures, showing the quantities of flow for which they are designed and shall receive written approval from the department before construction is started.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-040, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-040, filed 12/27/90, effective 1/31/91; Regulation .92.030, effective 3/11/60.]

WAC 246-271-050 Plans for sewage treatment works. Engineering report of sewage treatment works - Before detailed plans and specifications for new sewage treatment works or major extensions, alterations or improvements to existing sewage treatment works are prepared, every

(2003 Ed.)

owner or authorized agent shall submit one copy of a preliminary engineering report to the department and receive written approval. This report shall include the items listed under "scope of the engineering report" in the appendix.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-050, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-050, filed 12/27/90, effective 1/31/91; Order 72, § 248-92-040, filed 4/11/72; Regulation .92.040, effective 3/11/60.]

WAC 246-271-060 Plans for sewage treatment works—Requirements for engineers. All plans for new sewage treatment plants, major changes or additions to existing systems or plants shall be prepared under the supervision of a professional engineer licensed in accordance with chapter 283, Laws of 1947 (chapter 18.43 RCW). All copies of plans submitted to the department for review shall bear the seal of the professional engineer under whose supervision they have been prepared.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-060, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-060, filed 12/27/90, effective 1/31/91; Regulation .92.050, effective 3/11/60.]

WAC 246-271-090 Operation of sewage treatment plants—Disinfection. Effective disinfection of sewage discharges shall be provided in accordance with the determination of the department. If at any time effective disinfection cannot be accomplished due to the breakdown of equipment or the need for bypassing raw or partially treated sewage, or any other reason, the owner shall immediately notify the department by telephone or by facsimile machine.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-090, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-090, filed 12/27/90, effective 1/31/91; Regulation .92.080, effective 3/11/60.]

WAC 246-271-100 Irrigation with sewage. Raw sewage, or treatment plant effluent, shall not be used for irrigation, except under conditions as may be prescribed by the department.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-100, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-100, filed 12/27/90, effective 1/31/91; Regulation .92.090, effective 3/11/60.]

WAC 246-271-110 Use of sewage sludge for fertilizer. The use of sewage sludge for fertilizing material shall be in compliance with the limitations and procedures as may be prescribed by the department; and the owner shall notify the department of any intended use of sludge as a fertilizing material.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-110, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-110, filed 12/27/90, effective 1/31/91; Regulation .92.100, effective 3/11/60.]

WAC 246-271-120 Adoption of appendix details as rules. This appendix contains details referred to in the rules and regulations and is adopted as a part of these rules and regulations.

(2003 Ed.)

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-271-120, filed 12/27/90, effective 1/31/91; Appendix to Public Sewage Rules, effective 3/11/60.]

WAC 246-271-130 Appendix—Definitions. (1) "Department" - Washington state department of health.

(2) "Detailed plans" of sewage systems - Plans used for the construction of any sewer or sewer system.

(3) "Final plans" of sewage treatment works - Plans used for the construction of any sewage treatment works.

(4) "Industrial wastes" - The liquids, solids, or other wastes resulting from any process of industry, or from the development of any natural resource.

(5) "Industrial waste treatment works" - An arrangement of devices and structures for treating industrial wastes.

(6) "Owner" - The state, county, city, town, village, corporation, firm, company, institution, person or persons owning or operating any sewage system, sewage treatment plant, or industrial waste disposal system or treatment plant.

(7) "Pipe outlet" - A pipe line which conveys the effluent from a reservoir, sewage treatment plant, or other structure to its point of discharge.

(8) "Pumping station" - A station housing sewage pumps, and their appurtenances.

(9) "Secretary" - Secretary of the Washington state department of health or the secretary's authorized designee.

(10) "Sewage" - The water-carried waste products or discharge from human beings or other wastes from residences, public or private buildings, together with such ground, surface or storm water as may be present.

(11) "Sewage system" - A system of sewers and appurtenances for the collection, transportation, and pumping of sewage and industrial wastes.

(12) "Sewage treatment works" - An arrangement of devices and structures for treating sewage, industrial wastes, and sludge. Sometimes used as synonymous with sewage treatment plant.

(13) "Sewage works" - A comprehensive term which includes facilities for collecting, pumping, treating, and disposing of sewage; the sewage system and the sewage treatment works.

(14) "Sewer" - A pipe or conduit; generally closed, but normally not flowing full, for carrying sewage and other waste liquids.

(15) "Sewer outlet" - The point of final discharge of sewage or treatment plant effluent.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-130, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-130, filed 12/27/90, effective 1/31/91; Public Sewage Appendix, effective 3/11/60.]

WAC 246-271-140 Appendix—Report—Sewage system. The "report" shall include: -

(1) A description of the nature and extent of the area included in the present system (if any) and the area and extent to which plans provide sewage works for future development.

(2) The population trend and an estimate of future population to be served.

(3) A statement regarding the present and expected future quantity and character of sewage, including any indus-

[Title 246 WAC—p. 507]

trial wastes which may be present or expected in the sewage system.

(4) A discussion of limitations placed on infiltration and the infiltration problem.

(5) A statement regarding provisions for treatment.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-140, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-140, filed 12/27/90, effective 1/31/91; Public Sewage Appendix, effective 3/11/60.]

WAC 246-271-150 Appendix—General layout map.

The general layout map shall include the following items:

(1) **Boundaries** - The boundary lines of the municipality or sewer district to be sewer.

(2) **Existing sewers** - The location, size and direction of flow of all existing sanitary or combined trunk sewers and the boundaries of the areas served by each.

(3) **Proposed sewers** - The location, size and direction of flow of all proposed trunk sewers and the boundaries of the areas to be served by each.

(4) **Existing and proposed pump stations** - Location of all existing and proposed pumping stations designated to distinguish between those existing and proposed.

(5) **Topography and elevations** - Topography showing pertinent ground elevations and including existing and proposed streets, if such information is available.

(6) **Streams, lakes and other bodies of water** - The location and direction of flow of major streams and the high and low elevations of all water surfaces at sewer outlets and overflows.

(7) **Public water supplies** - The location of wells or other sources of public water supply, water storage reservoirs, and other structures of public health significance.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-271-150, filed 12/27/90, effective 1/31/91; Public Sewage Appendix, effective 3/11/60.]

WAC 246-271-160 Appendix—Plot plan. The plot plan shall include: -

(1) **Boundaries** - The boundary lines of the area involved.

(2) **Sewer lines** - All sewer lines and their tie-in with the existing system.

(3) **Other data** - Elevations, slopes, pipe sizes, and man-hole spacings.

(4) **Public water supplies** - The location of wells or other sources of public water supply, water storage reservoirs, and other structures of public health significance.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-271-160, filed 12/27/90, effective 1/31/91; Public Sewage Appendix, effective 3/11/60.]

WAC 246-271-170 Appendix—Engineering report—Sewage treatment works. The engineering report for the sewage treatment works shall include the following items together with any other relevant data -

(1) The purpose and need for the proposed project.

(2) The nature and extent of the area included in the present system and the area and extent to which plans provide

[Title 246 WAC—p. 508]

sewage works for future development. If the area to be served by existing and proposed sewers does not include the entire municipality, sewer district, or natural drainage area, give a brief description of that portion not included, together with information as to the probability of future development, and the method by which this area can be served by treatment works.

(3) The population trend as indicated by available records, and give the estimated future population for the design period. Describe briefly the method used to determine future population trends.

(4) Any existing sewage treatment works as they are related to the proposed project.

(5) Discuss the location of water supply and distribution structures as they relate to the various portions of the proposed sewage works.

(6) The considerations given to possibility of garbage disposal in sewage works.

(7) List of all establishments producing appreciable quantities of industrial wastes and the quantity, production periods, and character of industrial wastes in so far as they may affect the sewerage system or sewage treatment works. Consideration shall be given to future industrial expansion.

(8) The degree of treatment proposed based upon the size, usage and character of the receiving body of water and upon the amount and strength of sewage or waste to be treated and other influencing factors.

(9) The type or types of treatment process proposed based upon the character of sewage or waste to be handled and the degree of treatment required.

(10) Data on the volume and strength of sewage and the design data regarding flow and strength.

(11) The ratio of interception in connection with existing combined sewers, and the quantity expected to be bypassed during storms.

(12) The basic design data of each unit of the treatment works.

(13) Provision for future needs.

(14) Discussion of the various sites available and the advantages of the one recommended. The proximity of residences or developed areas to any treatment works. The relationship of maximum high water to the plant site and various plant units.

(15) Expected efficiencies of each unit and the entire plant, and the character of effluent expected.

(16) A flow diagram showing general layout of various units.

[Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-271-170, filed 12/27/90, effective 1/31/91; Public Sewage Appendix, effective 3/11/60.]

WAC 246-271-180 Appendix—Preliminary report, industrial waste treatment works. The preliminary report on industrial waste disposal or treatment facilities shall include the following items where pertinent -

(1) Type of industry.

(2) Kind and quantity of finished products.

(3) The amount of process waste and its sources.

(2003 Ed.)

(4) The quantity of unpolluted water, such as cooling water, etc., and the provision for segregation for separate discharge.

(5) Description of the waste, including if possible a chemical analysis.

(6) The amount and kind of chemicals used in the process, if any.

(7) The basic design data of the treatment units.

(8) All necessary maps and layout sketches, including any flow diagrams.

(9) Results to be expected from the treatment process.

(10) All data necessary to indicate the location of the outlet pipe and method of diffusing the waste into the receiving water.

(11) If any domestic sewage is to be disposed of through the system, a brief description in compliance with the provisions of WAC 246-271-030 should be included.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-271-180, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-271-180, filed 12/27/90, effective 1/31/91; Public Sewage Appendix, effective 3/11/60.]

WAC 246-271-990 Fees. (1) The minimum fee for required review of land application of municipal wastewater shall be two hundred dollars. If review time exceeds four hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee.

(2) The minimum fee for required review of comprehensive sewer plans shall be two hundred dollars. If review time exceeds four hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-271-990, filed 12/27/90, effective 1/31/91.]

**Chapter 246-272 WAC
ON-SITE SEWAGE SYSTEMS**

WAC

246-272-00101	Purpose, objectives, and authority.
246-272-00501	Administration.
246-272-01001	Definitions.
246-272-02001	Local regulation.
246-272-03001	Applicability.
246-272-04001	Alternative systems and proprietary devices.
246-272-05001	Experimental systems.
246-272-07001	Connection to public sewer system.
246-272-08001	Large on-site sewage systems (LOSS).
246-272-09001	Permits for OSS under three thousand five hundred gallons per day.
246-272-09501	Location.
246-272-11001	Soil and site evaluation.
246-272-11501	Design.
246-272-12501	Holding tank sewage systems.
246-272-13501	Installation.
246-272-14501	Inspection.
246-272-15501	Operation and maintenance.
246-272-16501	Repair of failures.
246-272-17501	Expansions.
246-272-18501	Abandonment.
246-272-19501	Septage management.
246-272-20501	Developments, subdivisions, and minimum land area requirements.
246-272-21501	Areas of special concern.
246-272-22501	Certification of designers, installers, pumpers, inspectors, and maintenance personnel.
246-272-23501	Technical review committee.
246-272-24001	State advisory committee.
246-272-25001	Waiver of state regulations.
246-272-26001	Enforcement.

246-272-27001	Notice of decision—Adjudicative proceeding.
246-272-28001	Severability.
246-272-990	Fees.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

246-272-001	Authority. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-001, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-010, filed 6/3/83; Order 101, § 248-96-010, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-002	Purpose and objectives. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-002, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-011, filed 6/3/83; Order 101, § 248-96-011, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-005	Administration. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-005, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-018, filed 6/3/83; Order 101, § 248-96-018, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-010	Definitions. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-010, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-010, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-020, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 43.20.050. 83-13-014 (Order 259), § 248-96-020, filed 6/3/83; 81-05-028 (Order 208), § 248-96-020, filed 2/18/81; 80-04-038 (Order 196), § 248-96-020, filed 3/20/80; Order 101, § 248-96-020, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-020	Local regulation. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-020, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-020, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-025, filed 6/3/83.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-030	Applicability. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-030, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-030, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-040, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 43.20.050. 83-13-014 (Order 259), § 248-96-040, filed 6/3/83; 80-04-038 (Order 196), § 248-96-040, filed 3/20/80; Order 101, § 248-96-040, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-040	Alternative systems. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-040, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-046, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 43.20.050. 83-13-014 (Order 259), § 248-96-046, filed 6/3/83; Order 101, § 248-96-046, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-050	Experimental systems. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-050, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-047, filed 6/3/83.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
246-272-060	No surface discharge. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-060, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-060, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-050, filed 6/3/83; Order 101, § 248-96-050, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.

- 246-272-070 Connection to public sewer system. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-070, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-060, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 43.20.050. 83-13-014 (Order 259), § 248-96-060, filed 6/3/83; Order 101, § 248-96-060, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-080 Larger on-site sewage systems. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-080, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-080, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-075, filed 6/3/83; 80-04-038 (Order 196), § 248-96-075, filed 3/20/80; Order 101, § 248-96-075, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-090 Permit. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-090, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-080, filed 6/3/83; 80-04-038 (Order 196), § 248-96-080, filed 3/20/80; Order 101, § 248-96-080, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-100 Minimum land area requirement. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-100, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-100, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-090, filed 6/3/83; Order 101, § 248-96-090, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-110 Determination of site characteristics. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-110, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-110, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-094, filed 6/3/83.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-120 Subdivision and individual site review. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-120, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-120, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-095, filed 6/3/83; Order 101, § 248-96-095, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-130 Larger tract requirements. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-130, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-130, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-096, filed 6/3/83; Order 101, § 248-96-096, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-140 Location. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-140, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-100, filed 6/3/83; Order 101, § 248-96-100, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-150 Design. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-150, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-150, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-110, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 43.20.050. 83-13-014 (Order 259), § 248-96-110, filed 6/3/83; Order 101, § 248-96-110, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-160 Repair of failures along marine shorelines. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-160, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-160, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-120, filed 10/10/89, effective 11/10/89.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-170 Marine expansions. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-170, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-170, filed 12/27/90, effective 1/31/91. Statutory Authority: 1989 c 349. 89-21-026 (Order 332), § 248-96-125, filed 10/10/89, effective 11/10/89.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-180 Designer program. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-180, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-130, filed 6/3/83; Order 101, § 248-96-130, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-190 Inspection. [Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-272-190, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-272-190, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-140, filed 6/3/83; Order 101, § 248-96-140, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-200 Appeals. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-200, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-150, filed 6/3/83.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-210 Waiver of state regulations. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-210, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-160, filed 6/3/83; Order 101, § 248-96-160, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-220 Disposal of septic tank waste. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-220, filed 12/27/90, effective 1/31/91; Order 101, § 248-96-170, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-230 Installer requirements. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-230, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-175, filed 6/3/83; Order 101, § 248-96-175, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.
- 246-272-240 State advisory committee. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-272-240, filed 12/27/90, effective 1/31/91; 83-13-014 (Order 259), § 248-96-180, filed 6/3/83; Order 101, § 248-96-180, filed 6/10/74.] Repealed by 94-09-025, filed 4/15/94, effective 1/1/95. Statutory Authority: RCW 43.20.050.

WAC 246-272-00101 Purpose, objectives, and authority. (1) The purpose of this chapter is to protect the public health by minimizing:

(a) The potential for public exposure to sewage from on-site sewage systems; and

(b) Adverse effects to public health that discharges from on-site sewage systems may have on ground and surface waters.

(2) This chapter regulates the location, design, installation, operation, maintenance, and monitoring of on-site sewage systems to:

(a) Achieve long-term sewage treatment and effluent disposal; and

(b) Limit the discharge of contaminants to waters of the state.

(3) This chapter is adopted by the state board of health in accordance with the authority granted in RCW 43.20.050 to establish minimum requirements for the department of

health, and local boards of health whether or not they choose to adopt local regulations.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-00101, filed 4/15/94, effective 1/1/95.]

WAC 246-272-00501 Administration. The local health officers and the department shall administer this chapter under the authority and requirements of chapters 70.05, 70.08, 70.46, and 43.70 RCW. Under RCW 70.05.060(7), fees may be charged for this administration.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-00501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-01001 Definitions. "Additive" means a commercial product added to an on-site sewage system intended to affect performance or aesthetics of an on-site sewage system.

"Alternative system" means an on-site sewage system other than a conventional gravity system or conventional pressure distribution system. Properly operated and maintained alternative systems provide equivalent or enhanced treatment performance as compared to conventional gravity systems.

"Approved" means a written statement of acceptability, in terms of the requirements in this chapter, issued by the local health officer or the department.

"Approved list" means "List of Approved Systems and Products," developed annually and maintained by the department and containing the following:

- List of proprietary devices approved by the department;
- List of specific systems meeting treatment standard 1 and treatment standard 2;
- List of experimental systems approved by the department;
- List of septic tanks, pump chambers, and holding tanks approved by the department.

"Area of special concern" means an area of definite boundaries delineated through public process, where a local health officer, or the department in consultation with the health officer, determines additional requirements for on-site sewage systems may be necessary to reduce potential failures, or minimize negative impact of on-site systems upon public health.

"Cesspool" means a pit receiving untreated sewage and allowing the liquid to seep into the surrounding soil or rock.

"Conforming system" means any on-site sewage system, except an experimental system, meeting any of the following criteria:

Systems in full compliance with new construction requirements under this chapter; or

Systems approved, installed, and operating in accordance with requirements of previous editions of this chapter; or

Systems or repairs permitted through departmental concurrence by the waiver process which assure public health protection by higher treatment performance or other methods.

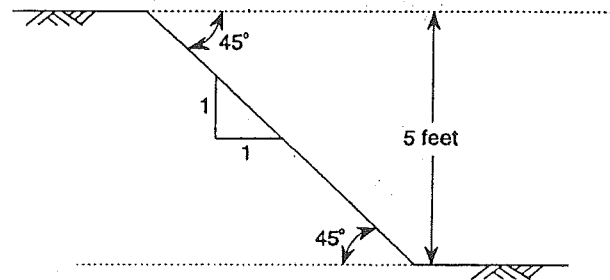
(2003 Ed.)

"Conventional gravity system" means an on-site sewage system consisting of a septic tank and a subsurface soil absorption system with gravity distribution of the effluent.

"Conventional pressure distribution system" means an on-site sewage system consisting of a septic tank and a subsurface soil absorption system with pressure distribution of the effluent. Design, operation and maintenance, and performance monitoring are described by "Guidelines for Pressure Distribution Systems" by the Washington state department of health.

"Covenant" means a recorded agreement stating certain activities and/or practices are required or prohibited.

"Cuts and/or banks" means any naturally occurring or artificially formed slope greater than one hundred percent (forty-five degrees) and extending vertically at least five feet from the toe of the slope to the top of the slope as follows:



"Designer" means a person who matches site and soil characteristics with appropriate on-site sewage technology.

"Development" means the creation of a residence, structure, facility, mobile home park, subdivision, planned unit development, site, area, or any activity resulting in the production of sewage.

"Department" means the Washington state department of health.

"Disposal component" means a subsurface absorption system (SSAS) or other soil absorption system receiving septic tank or other pretreatment device effluent and transmitting it into original, undisturbed soil.

"Effluent" means liquid discharged from a septic tank or other on-site sewage system component.

"Engineer" means a person who is licensed and in good standing under chapter 18.43 RCW.

"Expansion" means a change in a residence, facility, site, or use that:

Causes an on-site sewage system to exceed its existing treatment or disposal capability, for example, when a residence is increased from two to three bedrooms or a change in use from an office to a restaurant; or

Reduces the treatment or disposal capability of the existing on-site sewage system or the reserve area, for example, when a building is placed over a reserve area.

"Experimental system" means any alternative system: Without design guidelines developed by the department; or

A proprietary device or method which has not yet been evaluated and approved by the department.

"Failure" means a condition of an on-site sewage system that threatens the public health by inadequately treating

[Title 246 WAC—p. 511]

sewage or by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include:

Sewage on the surface of the ground;

Sewage backing up into a structure caused by slow soil absorption of septic tank effluent;

Sewage leaking from a septic tank, pump chamber, holding tank, or collection system;

Cesspools or seepage pits where evidence of ground water or surface water quality degradation exists;

Inadequately treated effluent contaminating ground water or surface water; or

Noncompliance with standards stipulated on the permit.

"Ground water" means a subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides. Indications of ground water may include:

Water seeping into or standing in an open excavation from the soil surrounding the excavation.

Spots or blotches of different color or shades of color interspersed with a dominant color in soil, commonly referred to as mottling. Mottling is a historic indication for the presence of ground water caused by intermittent periods of saturation and drying, and may be indicative of poor aeration and impeded drainage. Also see "water table."

"Holding tank sewage system" means an on-site sewage system which incorporates a holding tank, the services of a sewage pumper/hauler, and the off-site treatment and disposal for the sewage generated.

"Industrial wastewater" means the water or liquid carried waste from an industrial process. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feedlots, poultry houses, or dairies. The term includes contaminated storm water and leachate from solid waste facilities.

"Installer" means a qualified person approved by a local health officer to install or repair on-site sewage systems or components.

"Large on-site sewage system (LOSS)" means any on-site sewage system with design flows, at any common point, greater than three thousand five hundred gallons per day.

"Local health officer" means the health officer of the city, county, or city-county health department or district within the state of Washington, or a representative authorized by and under the direct supervision of the local health officer, as defined in chapter 70.05 RCW.

"May" means discretionary, permissive, or allowed.

"On-site sewage system (OSS)" means an integrated arrangement of components for a residence, building, industrial establishment or other places not connected to a public sewer system which:

Convey, store, treat, and/or provide subsurface soil treatment and disposal on the property where it originates, upon adjacent or nearby property; and

Includes piping, treatment devices, other accessories, and soil underlying the disposal component of the initial and reserve areas.

"Ordinary high-water mark" means the mark on lakes, streams, and tidal waters, found by examining the beds and banks and ascertaining where the presence and action of

waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland with respect to vegetation, as that condition exists on the effective date of this chapter, or as it may naturally change thereafter. The following definitions apply where the ordinary high-water mark cannot be found:

The ordinary high-water mark adjoining marine water is the elevation at mean higher high tide; and

The ordinary high-water mark adjoining freshwater is the line of mean high water.

"Person" means any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of any such entities.

"Planned unit development" means a development characterized by a unified site design, clustered residential units and/or commercial units, and areas of common open space.

"Pressure distribution" means a system of small diameter pipes equally distributing effluent throughout a trench or bed, as described in the *"Guidelines for Pressure Distribution Systems"* by the department. Also see "conventional pressure distribution."

"Proprietary device or method" means a device or method classified as an alternative system, or a component thereof, held under a patent, trademark or copyright.

"Public sewer system" means a sewerage system:

Owned or operated by a city, town, municipal corporation, county, or other approved ownership consisting of a collection system and necessary trunks, pumping facilities and a means of final treatment and disposal; and

Approved by or under permit from the department of ecology, the department of health and/or a local health officer.

"Pumper" means a person approved by the local health officer to remove and transport wastewater or septage from on-site sewage systems.

"Repair" means restoration, by reconstruction or relocation, or replacement of a failed on-site sewage system.

"Reserve area" means an area of land approved for the installation of a conforming system and dedicated for replacement of the OSS upon its failure.

"Residential sewage" means sewage having the constituency and strength typical of wastewater from domestic households.

"Restrictive layer" means a stratum impeding the vertical movement of water, air, and growth of plant roots, such as hardpan, claypan, fragipan, caliche, some compacted soils, bedrock and unstructured clay soils.

"Seepage pit" means an excavation more than three feet deep where the sidewall of the excavation is designed to dispose of septic tank effluent. Seepage pits may also be called "dry wells."

"Septage" means the mixture of solid wastes, scum, sludge, and liquids pumped from within septic tanks, pump chambers, holding tanks, and other OSS components.

"Septic tank" means a watertight pretreatment receptacle receiving the discharge of sewage from a building sewer or sewers, designed and constructed to permit separation of

settleable and floating solids from the liquid, detention and anaerobic digestion of the organic matter, prior to discharge of the liquid.

"Sewage" means any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places. For the purposes of these regulations, "sewage" is generally synonymous with domestic wastewater. Also see "residential sewage."

"Shall" means mandatory.

"Soil log" means a detailed description of soil characteristics providing information on the soil's capacity to act as an acceptable treatment and disposal medium for sewage.

"Soil type" means a numerical classification of fine earth particles and coarse fragments as described in WAC 246-272-11001 (2)(e).

"Subdivision" means a division of land or creation of lots or parcels, described under chapter 58.17 RCW, now or as hereafter amended, including both long and short subdivisions, planned unit developments, and mobile home parks.

"SSAS" or "subsurface soil absorption system" means a system of trenches three feet or less in width, or beds between three and ten feet in width, containing distribution pipe within a layer of clean gravel designed and installed in original, undisturbed soil for the purpose of receiving effluent and transmitting it into the soil.

"Surface water" means any body of water, whether fresh or marine, flowing or contained in natural or artificial unlined depressions for significant periods of the year, including natural and artificial lakes, ponds, springs, rivers, streams, swamps, marshes, and tidal waters.

"Table VI repair" means a repair or replacement of an existing on-site sewage system which, because of site limitations, must utilize treatment standards shown in Table VI in lieu of compliance with new construction requirements for vertical separation and/or horizontal set back from surface waters or drinking water wells or springs.

"Treatment standard 1" means a thirty-day average of less than 10 milligrams per liter of biochemical oxygen demand (five-day BOD₅), 10 milligrams per liter of total suspended solids (TSS), and a thirty-day geometric mean of less than 200 fecal coliform per 100 milliliters.

"Treatment standard 2" means a thirty-day average of less than 10 milligrams per liter of biochemical oxygen demand (five-day BOD₅), 10 milligrams per liter of total suspended solids (TSS), and a thirty-day geometric mean of less than 800 fecal coliform per 100 milliliters.

"Unit volume of sewage" means:

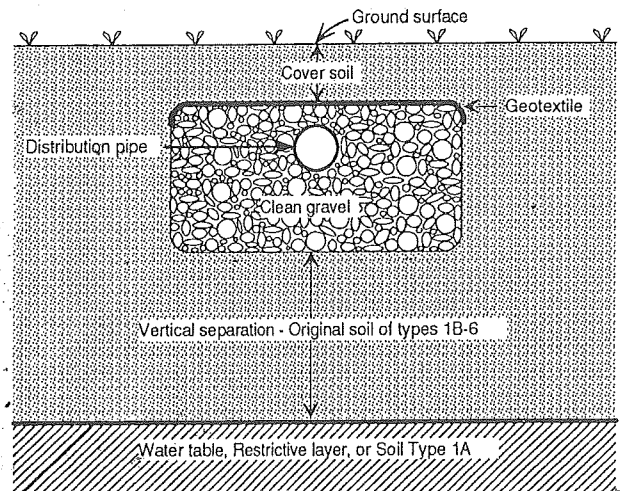
A single family residence;

A mobile home site in a mobile home park; or

Four hundred fifty gallons of sewage per day where the proposed development is not single family residences or a mobile home park.

"Vertical separation" means the depth of unsaturated, original, undisturbed soil of soil types 1B-6 between the bottom of a disposal component and the highest seasonal water table, a restrictive layer, or soil type 1A, as illustrated below by the profile drawing of a subsurface soil absorption system:

(2003 Ed.)



"Water table" means the upper surface of the ground water, whether permanent or seasonal. Also see "ground water."

"Wave barrier" means a bulkhead of adequate height and construction protecting the immediate area of on-site sewage system components from wave action.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-01001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-02001 Local regulation. (1) Local boards of health may adopt and enforce local rules and regulations governing on-site sewage systems when the local regulations are:

(a) Consistent with, and as stringent as, this chapter; and

(b) Approved by the department prior to the effective date of local regulations.

(2) A local board of health may apply for departmental approval of local regulations at any time by initiating the following procedure:

(a) The local board shall submit the proposed local regulations to the department.

(b) Within ninety days of receipt, the department shall:

(i) Approve the regulation; or

(ii) Signify automatic tacit agreement with the local regulations and permitting local implementation by failing to act; or

(iii) Deny approval of the regulations. If the department determines local regulations are not consistent with this chapter, the department shall provide specific reasons for denial.

(3) Upon receipt of departmental approval or after ninety days without notification, whichever comes first, the local board may implement adopted regulations. The local board shall provide a copy of the adopted local regulations to the department.

(4) If the department denies approval of local regulations, the local board of health may:

(a) Resubmit revised regulations for departmental consideration; or

(b) Submit a written request for a review of the departmental denial within one hundred twenty days from the date the local board of health receives the written reasons for the denial.

(5) Upon receipt of written request for review of the departmental denial, the department shall:

(a) Acknowledge the receipt of the request in writing; and

(b) Form a mutually acceptable advisory panel consisting of:

(i) One departmental employee;

(ii) One employee from a local health jurisdiction other than that which requested the review; and

(iii) One member of the technical review committee described in WAC 246-272-23501.

(6) If good faith efforts to reach agreement are unsuccessful, the local board of health may appeal the denial to the Washington state board of health for resolution.

(7) Nothing in this chapter shall prohibit the adoption and enforcement of more stringent regulations by local health departments where such regulations are needed to protect the public health.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-02001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-03001 Applicability. (1) The local health officer and the department:

(a) Shall apply this chapter to OSS treating wastewater and disposing of effluent from residential sewage sources;

(b) May apply this chapter to OSS for sources other than residential sewage, excluding industrial wastewater, if pre-treatment, siting, design, installation, and operation and maintenance measures provide treatment and effluent disposal equal to that required of residential sewage.

(2) Preliminary plats specifying general methods of sewage treatment, disposal, system designs and locations approved prior to the effective date of these regulations shall be acted upon in accordance with regulations in force at the time of preliminary plat approval for a maximum period of five years from the date of approval or for an additional year beyond the effective date of these regulations, whichever assures the most lenient expiration date.

(3) A valid sewage system design approval, or installation permit issued prior to the effective date of these regulations:

(a) Shall be acted upon in accordance with regulations in force at the time of issuance;

(b) Shall have a maximum validity period of five years from the date of issuance or remain valid for an additional year beyond the effective date of these regulations, whichever assures the most lenient expiration date; and

(c) May be modified to include additional requirements if the health officer determines that a serious threat to public health exists.

(4) The Washington state department of ecology has authority and approval over:

(a) Domestic or industrial wastewater under chapter 173-240 WAC; and

(b) Sewage systems using mechanical treatment, or lagoons, with ultimate design flows above three thousand five hundred gallons per day.

(5) The Washington state department of health has authority and approval over:

(a) Systems with design flows through any common point between three thousand five hundred to fourteen thousand five hundred gallons per day; and

(b) Any large on-site sewage system "LOSS" for which jurisdiction has been transferred to the department of health under conditions of memorandum of agreement with the department of ecology.

(6) The local health officer has authority and approval over:

(a) Systems with design flows through any common point up to three thousand five hundred gallons per day;

(b) Any large on-site sewage system "LOSS" for which jurisdiction has been transferred to a local health jurisdiction from the department by contract.

(7) Where this chapter conflicts with chapter 90.48 RCW, Water pollution control, the requirements under those statutes apply.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-03001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-04001 Alternative systems and proprietary devices. (1) The department:

(a) May approve guidelines for alternative systems if they are based upon:

(i) Sufficient theory and/or applied research to warrant guideline development; and

(ii) Sufficient accumulation of performance data to prove treatment standards are met; and

(iii) Review and recommendations by the technical review committee established under WAC 246-272-23501.

(b) May maintain lists of approved methods, proprietary devices, guidelines, and alternative systems.

(c) May charge fees to cover the cost of administering an alternative system program.

(2) The local health officer or department shall only permit installation of alternative systems for which there are alternative system guidelines, or a proprietary device if it appears on the list of approved systems or devices maintained by the department under subsection (1)(a) and (b) of this section.

(3) The local health officer:

(a) May require performance monitoring or sampling of any alternative system.

(b) May charge fees to cover the costs for monitoring system performance.

(c) Shall submit copies of evaluation reports to the department when alternative system performance is evaluated.

(d) Shall notify the department of alternative system approvals and failures.

(4) Persons desiring product inclusion on the approved list, or intending to alter an approved device or method, shall submit to the department:

(a) Documentation, data, plans, or other information requested, in an acceptable format for technical evaluation to certify that the product meets all the criteria in the appropriate guidelines; and

(b) Required fees.

(5) Persons desiring continued retention on the list of approved systems and products shall submit to the department:

- (a) An acceptable annual report which includes any changes in the product and certifies that the device meets appropriate guidelines; and
- (b) Required fees.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-04001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-05001 Experimental systems. (1) Persons proposing a system for inclusion on the departmental approved list of experimental systems shall submit to the department for review and approval, a written proposal which includes:

- (a) Description of existing theory and/or applied research supporting the application;
- (b) Proposed testing protocol;
- (c) Proposed operation, maintenance, and monitoring detail and schedules;
- (d) Maximum number of installations;
- (e) Proposed locations and uses, if multiple locations are proposed;
- (f) Proposed reporting detail and frequency;
- (g) Proposed schedule for the experimental program;
- (h) Name(s) of the person(s) financially responsible for the experimental program, including:
 - (i) Routine operation and maintenance;
 - (ii) Monitoring; and
 - (iii) Repair and/or replacement of the system.
- (i) Verification that the proposal is consistent with the intent of this chapter, requirements of this section, and the departmental application process.

(2) The local health officer:

(a) May permit a limited number of specific experimental systems if:

(i) The specific system is included on the department's approved list of experimental systems under subsection (5)(b) of this section;

(ii) The site will accommodate the installation of a conforming system in the event of failure of the experimental system;

(iii) Local agreements to provide for monitoring, sampling, testing, reporting, maintenance, repairs, and the replacement of the system in accordance with the protocol approved by the department under subsection (1) of this section are completed and signed.

(b) May charge fees to cover the cost of evaluating or monitoring the experimental system.

(3) After the experimental system proposal is approved, the person noted as responsible for an experimental system program on the departmental approved list shall:

(a) Follow the experimental system protocol, procedures, and other related written agreements approved by the department and the local health officer;

(b) Monitor the experimental system and submit records as required to meet department's approval or the local health officer's permit; and

(c) Annually renew each state experimental system permit.

(2003 Ed.)

(4) A person desiring to install an experimental system shall:

(a) Obtain a permit from the local health officer;

(b) Submit a written promise to the health officer agreeing to abandon the experimental system and install a conforming system if:

(i) The system fails;

(ii) The performance of the experimental system is unsatisfactory; or

(iii) The applicant fails to adequately monitor the experimental system and submit records as required in the department's approval or the local health officer's permit;

(iv) The system components do not function as indicated by submitted documents;

(v) Performance does not meet the anticipated objectives of the experiment; or

(vi) The state experimental system permit is not renewed annually.

(c) Provide financial guarantees, acceptable to the health officer, and a copy of the recorded covenant required under (b) of this subsection to the local health officer; and

(d) Obtain through the local health officer an annually renewable state experimental system permit.

(5) The department:

(a) Shall obtain recommendations from the technical review committee prior to issuing approval of a proposal;

(b) Shall maintain a list of experimental systems that have been approved by the department, which also indicates each system's current status, application, use, and restrictions;

(c) Shall monitor the performance of the experimental system, including evaluation of any failures;

(d) Shall annually renew the state experimental system permit when:

(i) The requirements under subsections (3)(a) and (b) of this section are satisfied; and

(ii) The performance of the system is satisfactory; and

(e) Shall no longer apply the requirements of this section when the requirements of WAC 246-272-04001 are satisfied.

(6) The department and the local health officer shall not permit an experimental LOSS.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-05001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-07001 Connection to public sewer system. (1) When adequate public sewer services are available within two hundred feet of the residence or facility the local health officer, upon the failure of an existing on-site sewage system may:

(a) Require hook-up to a public sewer system; or

(b) Permit the repair or replacement of the on-site sewage system only if a conforming system can be designed and installed.

(2) Except as noted in subsection (1) of this section, the owner of a failure shall abandon the OSS under WAC 246-272-18501 and connect the residence or other facility to a public sewer system when:

(a) The distance between the residence or other facility and an adequate public sewer is two hundred feet or less as

measured along the usual or most feasible route of access; and

(b) The sewer utility allows the sewer connection.

(3) The owner of a residence or other facility served by a Table VI repair as defined in WAC 246-272-01001 of this chapter shall abandon the OSS according to the requirements specified in WAC 246-272-18501, and connect the residence or other facility to a public sewer system when:

(a) Connection is deemed necessary to protect public health by the local health officer;

(b) An adequate public sewer becomes available within two hundred feet of the residence or other facility as measured along the usual or most economically feasible route of access; and

(c) The sewer utility allows the sewer connection.

(4) Local boards of health may require a new development to connect to a public sewer system to protect public health.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-07001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-08001 Large on-site sewage systems (LOSS). (1) Persons proposing a new LOSS for which the department has jurisdiction by WAC or memorandum of agreement with the department of ecology shall meet the requirements specified in "*Design Standards for Large On-site Sewage Systems*," 1993, Washington state department of health (available upon written request to the department).

(2) Persons shall submit the documents and fees specified under (a) through (f) of this subsection and obtain approval from the department before installing a LOSS to serve any facility:

(a) A preliminary report, stamped and signed by an engineer, including:

(i) A discussion of the proposed project, including the schedule of construction;

(ii) A discussion of compliance with other state and local zoning, platting, health, and building regulations as they relate to sewage treatment and disposal;

(iii) An analysis of the site's capacity to treat and dispose of the proposed quantity and quality of sewage;

(iv) An analysis of the factors identified in WAC 246-272-20501 (2)(d)(ii)(A); and

(v) A soil and site evaluation as specified in WAC 246-272-11001 signed by the evaluator;

(vi) A management plan describing the:

(A) Management entity consisting of one of the following:

(I) For residential subdivisions where the lots are individually owned, a public entity serves as the primary management entity, or as the third party trust for a private management entity; or

(II) For other uses, including single ownership, a public entity or a private entity via an appropriate contract or agreement provides management;

(B) Duties of the management entity, including specific tasks and frequency of operation and maintenance;

(C) Controls to ensure the continuity and permanency of proper operation and maintenance;

(D) Methods and frequency of monitoring, recordkeeping, and reporting to the department;

(E) Rights and responsibilities of management; and

(F) Rights and responsibilities of persons purchasing connections to the LOSS.

(b) Complete plans and specifications of the LOSS:

(i) Showing a conventional pressure distribution system with three feet of vertical separation;

(ii) Meeting all other design criteria within "*Design Standards for Large On-site Sewage Systems*," 1993, department of health (available upon written request to the department); and

(iii) Stamped and signed by an engineer;

(c) A schedule of inspections to confirm the installation conforms to the plans and specifications;

(d) A draft operation and maintenance manual, describing the LOSS and outlining routine maintenance procedures for proper operation of the system;

(e) Required fees; and

(f) Other information as required by the department.

(3) Persons desiring to repair, modify or expand a facility served, or to be served by a LOSS shall submit all documents and fees specified under subsection (2)(a) through (f) of this section, unless the department waives submission of some elements as unnecessary, and obtain approval from the department.

(4) The department:

(a) Shall not change the terms of a project's construction approval during a two-year validity period. However additional terms to protect public health may be included before granting one-year approval permit extensions;

(b) Shall conduct a presite inspection; and

(c) May allow the applicant to renew approval under the initial terms for successive one-year periods if:

(i) The LOSS is incomplete two years after the department's approval;

(ii) The applicant requests renewal in writing; and

(iii) The applicant submits required fees.

(5) A qualified installer shall install the LOSS.

(6) The applicant or applicant's agent:

(a) Shall comply with all conditions set forth in the department's construction approval;

(b) May request extensions to the construction approval permit; and

(c) Shall comply with any additional conditions upon construction approval extensions set forth by the department, and pay required fees for renewing the approval.

(7) Before a new LOSS is used:

(a) An engineer shall stamp, sign, and submit a LOSS construction report to the department within sixty days following the completion of construction of the LOSS including:

(i) A completed form stating the LOSS was constructed in accordance with the department's approved plans and specifications; and

(ii) An "as built" or "record" drawing;

(b) The department shall conduct a final inspection; and

(c) The owner shall:

(i) Submit an operation and maintenance manual developed by an engineer for the installed LOSS to the department for review and approval; and

(ii) Obtain a LOSS operating permit from the department by:

(A) Completing and submitting forms to the department; and

(B) Paying required fees.

(8) The owner of a LOSS that has been approved by the department or local health officer or constructed after July 1, 1984, shall:

(a) Obtain a LOSS operating permit from the department; and

(b) Annually renew it.

(9) The owner shall annually renew the LOSS operating permit by:

(a) Continued retention of an approved management entity to operate and maintain the LOSS;

(b) Submitting a report to the department demonstrating the LOSS is operated, maintained, and monitored in accordance with this chapter and the approved operation and maintenance manual; and

(c) Submitting required fees.

(10) The department:

(a) Shall issue a LOSS operating permit to owners of LOSS meeting the requirements of subsections (1) through (7) of this section;

(b) Shall annually renew the LOSS operating permit when the owner has complied with the requirements under subsection (9) of this section;

(c) May revoke the LOSS operating permit when the:

(i) Approved management entity ceases to operate and maintain the LOSS;

(ii) Owner does not meet other conditions of the LOSS operating permit; or

(iii) LOSS fails;

(d) Shall monitor the performance of LOSS; and

(e) Shall apply the requirements under WAC 246-272-16501 to failing LOSS.

(11) The department may request the assistance of the local health officer to review the site or the design or to inspect the construction of a LOSS.

(12) A local health officer and the department may enter into a contract under which:

(a) The local health officer will assume the department's responsibilities in subsections (2), (4), (6), (7)(a), (b) and (c)(i) of this section to regulate LOSS; and

(b) The local health officer may charge fees to a LOSS applicant or owner for services provided if the authorization for such fees is set forth in local regulations adopted under this chapter.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-08001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-09001 Permits for OSS under three thousand five hundred gallons per day. (1) Prior to beginning the construction process, a person proposing the installation, repair, modification, connection to, or expansion of an OSS, shall develop and submit the following to the local health officer and obtain approval:

(a) General information including:

(i) Name and address of the property owner and the applicant at the head of each page of submission;

(ii) Parcel number and address, if available, of the site;

(iii) Source of drinking water supply;

(iv) Identification if the property is within the boundaries of a recognized sewer utility;

(v) Size of the parcel;

(vi) Type of permit for which application is being made, for example, new installation, repair, expansion, alteration, or operational;

(vii) Source of sewage, for example, residential, restaurant, or other type of business;

(viii) Location of utilities;

(ix) Name of the site evaluator;

(x) Name of the designer;

(xi) Date of application; and

(xii) Signature of applicant.

(b) The soil and site evaluation as specified under WAC 246-272-11001(2).

(c) A complete, detailed, and dimensional site plan including:

(i) Designated areas for the proposed initial system and the reserve area;

(ii) The location of all soil logs and other soil tests for the OSS;

(iii) General topography and/or slope of the site;

(iv) Site drainage characteristics;

(v) The location of existing and proposed encumbrances affecting system placement, including legal access documents if any component of the OSS is not on the lot where the sewage is generated; and

(vi) An arrow indicating north.

(d) A detailed system design meeting the requirements under WAC 246-272-11501 including:

(i) A dimensional drawing showing the location of components of the proposed OSS, and the system designed for the reserve area if reserve site characteristics differ significantly from the initial area;

(ii) Vertical cross-section drawings showing:

(A) The depth of the disposal component, the vertical separation, and depth of soil cover; and

(B) Other OSS components constructed at the site.

(iii) Calculations and assumptions supporting the proposed design, including:

(A) Soil type;

(B) Hydraulic loading rate in the disposal component; and

(C) System's maximum daily flow capacity.

(e) Such additional information as deemed necessary by the local health officer.

(2) The local health officer may develop the required information specified in subsection (1) of this section if authorization for such actions is included in local regulations.

(3) The local health officer shall:

(a) Issue a permit when the information submitted under subsection (1) of this section meets the requirements contained in this chapter and in local regulations;

(b) Identify the permit as a new installation, repair, expansion, modification, or operational permit;

- (c) Specify the expiration date on the permit;
- (d) Include a reminder on the permit application of the applicant's right of appeal; and
- (e) State the period of validity and the date and conditions of renewal when requiring operational permits to be obtained and retained;
- (4) The local health officer may revoke or deny a permit for due cause. Examples include, but are not limited to:
 - (a) Development or continued use of an OSS that threatens the public health;
 - (b) Misrepresentation or concealment of material fact in information submitted to the local health officer; or
 - (c) Failure to meet conditions of the permit or the regulations.
- (5) Before the local health officer issues a permit for the installation of an OSS to serve more than one development, the applicant shall show:
 - (a) An approved public entity owning or managing the OSS in perpetuity; or

- (b) An arrangement with a management entity acceptable to the local health officer, recorded in covenant, lasting until the on-site system is no longer needed, and containing, but not limited to:
 - (i) A legal easement allowing access for construction, operation and maintenance, and repair of the OSS; and
 - (ii) Identification of an adequate financing mechanism to assure the funding of operation, maintenance, and repair of the OSS.
- (6) The local health officer shall not delegate the authority to issue permits.
- (7) The local health officer may stipulate additional requirements for a particular permit if necessary for public health protection.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-09001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-09501 Location. (1) Persons shall design and install OSS to meet the minimum horizontal separations shown in Table I, Minimum Horizontal Separations:

TABLE I
MINIMUM HORIZONTAL SEPARATIONS

Items requiring setback	From edge of disposal component and reserve area	From septic tank, holding tank, containment vessel, pump chamber, and distribution box	From building sewer, collection, and non-perforated distribution line ¹
Non-public well or suction line	100 ft.	50 ft.	50 ft.
Public drinking water well	100 ft.	100 ft.	100 ft.
Public drinking water spring ³	200 ft.	200 ft.	100 ft.
Spring or surface water used as drinking water source ^{2,3}	100 ft.	50 ft.	50 ft.
Pressurized water supply line ⁴	10 ft.	10 ft.	10 ft.
Properly decommissioned well ⁵	10 ft.	N/A	N/A
Surface water ³			
Marine water	100 ft.	50 ft.	10 ft.
Fresh water	100 ft.	50 ft.	10 ft.
Building foundation	10 ft. ⁶	5 ft. ⁶	2 ft.
Property or easement line ⁶	5 ft.	5 ft.	N/A
Interceptor / curtain drains/ drainage ditches			
Down-gradient ⁷	30 ft.	5 ft.	N/A
Up-gradient ⁷	10 ft.	N/A	N/A
Down-gradient cuts or banks with at least 5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change	25 ft.	N/A	N/A
Down-gradient cuts or banks with at least 5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change	50 ft.	N/A	N/A

¹ "Building sewer" as defined by the most current edition of the Uniform Plumbing Code. "Nonperforated distribution" includes pressure sewer transport lines.

² If surface water is used as a public drinking water supply, the designer shall locate the OSS outside of the required sanitary control area.

³ Measured from the ordinary high-water mark.

⁴ The local health officer may approve a sewer transport line within ten feet of a water supply line if the sewer line is constructed in accordance with section 2.4 of the department of ecology's "Criteria For Sewage Works Design," revised October 1985, or equivalent.

⁵ Before any component can be placed within one hundred feet of a well, the designer shall submit a "decommissioned water well report" provided by a licensed well driller, which verifies that appropriate decommissioning procedures noted in chapter 173-160 WAC were followed. Once the well is properly decommissioned, it no longer provides a potential conduit to ground water, but septic tanks, pump chambers, containment vessels, or distribution boxes should not be placed directly over the site.

⁶ The local health officer may allow a reduced horizontal separation to not less than two feet where the property

line, easement line, or building foundation is up-gradient.

- 7 The item is down-gradient when liquid will flow toward it upon encountering a water table or a restrictive layer. The item is up-gradient when liquid will flow away from it upon encountering a water table or restrictive layer.

(2) Where any condition indicates a greater potential for contamination or pollution, the local health officer or the department may increase the minimum horizontal separations. Examples of such conditions include excessively permeable soils, unconfined aquifers, shallow or saturated soils, dug wells, and improperly abandoned wells.

(3) The horizontal separation between an OSS disposal component and an individual water well, spring, or surface water can be reduced to a minimum of seventy-five feet, by the local health officer, and be described as a "conforming" system upon signed approval by the health officer if the applicant demonstrates:

(a) Adequate protective site specific conditions, such as physical settings with low hydro-geologic susceptibility from contaminant infiltration. Examples of such conditions include evidence of confining layers and or aquatards separating potable water from the OSS treatment zone, excessive depth to ground water, down-gradient contaminant source, or outside the zone of influence; or

(b) Design and proper operation of an OSS system assuring enhanced treatment performance beyond that accomplished by meeting the vertical separation and effluent distribution requirements described in WAC 246-272-11501 (2)(f) Table IV; or

(c) Evidence of protective conditions involving both (a) and (b) of this subsection.

(4) Persons shall design and/or install disposal components only where:

(a) The slope is less than forty-five percent (twenty-four degrees);

(b) The area is not subject to:

(i) Encroachment by buildings or construction such as placement of swimming pools, power poles and underground utilities;

(ii) Cover by impervious material;

(iii) Vehicular traffic; or

(iv) Other activities adversely affecting the soil or the performance of the OSS.

(c) Sufficient reserve area for replacement exists to treat and dispose one hundred percent of the design flow;

(d) The land is stable; and

(e) Surface drainage is directed away from the site.

(5) A local health officer may allow expansion of an existing on-site sewage system adjacent to a marine shoreline that does not meet the minimum horizontal separation between the disposal component and the ordinary high water mark required by WAC 246-272-09501 Table I, provided that:

(a) The system meets all requirements of WAC 246-272-11501;

(b) The system complies with all other requirements of WAC 246-272-09501 and 246-272-17501;

(c) Horizontal separation between the disposal component and the ordinary high water mark is fifty feet or greater; and

(d) Vertical separation is three feet or greater with a conventional gravity drainfield, or two feet or greater with a conventional pressure distribution drainfield.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-09501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-11001 Soil and site evaluation. (1) The local health officer or department shall permit only engineers, qualified designers and soil scientists to perform soil and site evaluations.

(2) The person evaluating the soil and site shall:

(a) Record:

(i) A sufficient number of soil logs to evaluate conditions within:

(A) The initial disposal component; and

(B) The reserve area.

(ii) The ground water conditions, the date of the observation, and the probable maximum height;

(iii) The topography of the site;

(iv) The drainage characteristics of the site;

(v) The existence of structurally deficient soils subject to major wind or water erosion events such as slide zones and dunes;

(vi) The existence of designated flood plains; and

(vii) The location of existing encumbrances affecting system placement, such as:

(A) Wells and suction lines;

(B) Water sources and supply lines;

(C) Surface water;

(D) Abandoned wells;

(E) Outcrops of bedrock and restrictive layers;

(F) Buildings;

(G) Property lines and lines of easement;

(H) Interceptors such as footing drains, curtain drains and drainage ditches;

(I) Cuts, banks, and fills;

(J) Driveways and parking areas;

(K) Existing OSS; and

(L) Underground utilities.

(b) Use the soil and site evaluation procedures and terminology in accordance with chapter 3 and Appendix A of the "Design Manual: On-site Wastewater Treatment and Disposal Systems," United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980, except where modified by, or in conflict, with this chapter (available upon written request to the department);

(c) Use the soil names and particle size limits of the United States Department of Agriculture Soil Conservation Service classification system;

(d) Determine texture, structure, compaction and other soil characteristics that affect the treatment and water movement potential of the soil by using normal field and/or laboratory procedures such as particle size analysis; and

(e) Classify the soil as in Table II, Soil Textural Classification:

TABLE II
SOIL TEXTURAL CLASSIFICATION

Soil Type	Soil Textural Classifications
1A	Very gravelly ¹ coarse sands or coarser. All extremely gravelly ² soils.
1B	Very gravelly medium sand, very gravelly fine sand, very gravelly very fine sand, very gravelly loamy sands.
2A	Coarse sands (also includes ASTM C-33 sand).
2B	Medium sands.
3	Fine sands, loamy coarse sands, loamy medium sands.
4	Very fine sands, loamy fine sands, loamy very fine sands, sandy loams, loams.
5	Silt loams, that are porous and have well developed structure.
6	Other silt loams, sandy clay loams, clay loams, silty clay loams.
Unsuitable for treatment or disposal	Sandy clay, clay, silty clay, and strongly cemented or firm soils.

- 1 Very Gravelly = >35% and <60% gravel and coarse fragments, by volume.
- 2 Extremely Gravelly = >60% gravel and coarse fragments, by volume.

(3) The owner of the property or his agent shall:

(a) Prepare the soil log excavation to:

(i) Allow examination of the soil profile in its original position by:

(A) Excavating pits of sufficient dimensions to enable observation of soil characteristics by visual and tactile means to a depth three feet deeper than the anticipated bottom of the disposal component; or

(B) Stopping at a shallower depth if a water table or restrictive layer is encountered; and

(ii) Allow determination of the soil's texture, structure, color, bulk density or compaction, water absorption capabilities or permeability, and elevation of the highest seasonal water table; and

(b) Assume responsibility for constructing and maintaining the soil log excavation in a manner to reduce potential for physical injury by:

(i) Placing excavated soil no closer than two feet of the excavation;

(ii) Providing a ladder, earth ramp or steps for safe egress to a depth of four feet, then scoop out a portion from the floor to gain the additional two foot depth necessary to observe the six feet of soil face, however the scooped portion is not to be entered;

(iii) Provide a physical warning barrier around the excavation's perimeter; and

(iv) Fill the excavation upon completion of the soil log.

(4) The local health officer:

(a) Shall render a decision on the height of the water table within twelve months of receiving the application under precipitation conditions typical for the region;

(b) May require water table measurements to be recorded during months of probable high-water table conditions, if insufficient information is available to determine the highest seasonal water table;

(c) May require any other soil and site information affecting location, design, or installation; and

(d) May reduce the required number of soil logs for OSS serving a single family residence if adequate soils information has previously been developed.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-11001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-11501 Design. (1) The local health officer shall require that on-site sewage systems be designed only by engineers or qualified designers, except:

(a) Where at the discretion of the local health officer a resident owner of the single family residence is allowed to design a system for that residence; or

(b) The local health officer performs the soil and site evaluation and develops the design.

(2) The local health officer and the department shall require the following design criteria:

(a) All the sewage from the building served is directed to the OSS;

(b) Drainage from the surface, footing drains, roof drains, and other nonsewage drains is prevented from entering the OSS and the area where the OSS is located;

(c) The OSS is designed to treat and dispose of the following flows:

(i) For single family residences, one hundred twenty gallons per bedroom per day, with a minimum of two hundred forty gallons per day, unless technical justification is provided to support calculations using a lower design flow;

(ii) For other facilities, the design flows noted in "Design Manual: On-site Wastewater Treatment and Disposal Systems," United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 (available upon written request to the department.) If the type of facility is not listed in the EPA design manual, design flows from one of the following documents are used:

(A) "Design Standards for Large On-site Sewage Systems," 1993, Washington state department of health (available upon request to the department); or

(B) "Criteria for Sewage Works Design," revised October 1985, Washington state department of ecology (available upon written request to the department of ecology).

(d) Septic tanks:

(i) Are included on the approved list under subsection (5)(d) of this section;

(ii) Have the following minimum liquid capacities:

(A) For a single family residence use Table III, Required Minimum Liquid Volumes of Septic Tanks:

TABLE III
REQUIRED MINIMUM LIQUID VOLUMES OF SEPTIC TANKS

Number of bedrooms	Required minimum liquid tank volume in gallons
≤ 3	900
4	1000

TABLE III
REQUIRED MINIMUM LIQUID VOLUMES OF SEPTIC TANKS

Number of bedrooms	Required minimum liquid tank volume in gallons
Each additional bedroom	250

(B) For facilities handling residential sewage, other than one single family residence, one and one-half times the daily design flow with a minimum of one thousand gallons;

(iii) Have clean-out and inspection accesses within twelve inches of finished grade; and

(iv) Are designed with protection against floatation and ground water intrusion in high ground water areas;

(e) Pump chambers:

(i) Are included on the approved list under subsection (5)(d) of this section;

(ii) Have clean-out and inspection accesses at or above finished grade; and

(iii) Are designed with protection against floatation, ground water intrusion, and surface water inflow in high ground water areas;

(f) Methods for effluent distribution shall correlate to soil types 1A through soil type 6 as described by Table IV of this section, except where local regulations approved by the department under WAC 246-272-02001 are more stringent:

TABLE IV
METHODS OF EFFLUENT DISTRIBUTION FOR SOIL TYPES AND DEPTHS

SOIL TYPE	VERTICAL SEPARATION			
	< 1 foot	≥ 1 foot to < 2 feet	≥ 2 feet to < 3 feet	≥ 3 feet
1A	Not allowed	Pressure Distribution (see note) ^{1&2}	Pressure Distribution (see note) ¹	Pressure Distribution (see note) ¹
2A	Not allowed	Pressure Distribution (see note) ^{1&2}	Pressure Distribution	Pressure Distribution
1B - 6	Not allowed	Pressure Distribution (see note) ^{1&2}	Pressure Distribution	Gravity Distribution

¹ System meeting Treatment Standard 2 required.

² Mound systems installed where the original, undisturbed, unsaturated soil depth is between twelve and eighteen inches, require pretreatment by an intermittent sand filter.

(g) SSAS beds are only designed in soil types 2A, 2B, or 3, with a width not exceeding ten feet;

(h) Designs for conventional gravity systems in type 1A soil are not permitted due to the inadequate treatment performance capability of coarse grained soils. However, an exception may be permitted by the local health officer if the site meets all of the following criteria:

(i) System serves a single family residence;

(ii) The lot size is greater than two and one-half acres;

(iii) Annual precipitation in the region is less than twenty-five inches per year as described by "Washington Climate" published jointly by the Cooperative Extension Service, College of Agriculture, and Washington State University (available for inspection at Washington state libraries);

(iv) The system is located outside all areas of special concern defined by WAC 246-272-21501(1);

(v) The system is located outside the twelve county Puget Sound water quality authority region; and

(vi) The geologic conditions beneath the disposal component must satisfy the minimum unsaturated depth requirements to ground water identified by interpreting a readable, representative well log. The method for determination is described by "Design Guideline for Conventional Gravity Systems In Soil Type 1," (available upon written request to the department).

(i) Individual SSAS laterals greater than one hundred feet in length are to use pressure distribution;

(j) OSS having daily design flows between one thousand and three thousand five hundred gallons of sewage per day:

(i) Are located only in soil types 1 - 5;

(ii) Are located on slopes of less than thirty percent, or seventeen degrees; and

(iii) Have pressure distribution;

(k) Conventional gravity systems and conventional pressure distribution system have:

(i) The calculation of absorption area based upon the design flows in (c) of this subsection and loading rates equal to or less than those in Table V, Maximum hydraulic loading rate for residential sewage, and applied only to the bottom of the trench of the excavation.

TABLE V
MAXIMUM HYDRAULIC LOADING RATE FOR RESIDENTIAL SEWAGE¹

SOIL TYPE	SOIL TEXTURAL CLASSIFICATION DESCRIPTION	LOADING RATE gal./sq. ft./day
1A	Very gravelly ² coarse sands or coarser, extremely gravelly ³ soils.	Varies according to system selected to meet Treatment Standard 2 ⁴
1B	Very gravelly medium sands, very gravelly fine sands, very gravelly very fine sands, very gravelly loamy sands.	Varies according to soil type of the non-gravel portion ⁵
2A	Coarse sands (includes the ASTM C-33 sand).	1.2
2B	Medium sands.	1.0
3	Fine sands, loamy coarse sands, loamy medium sands.	0.8
4	Very fine sands, loamy fine sands, loamy very fine sands, sandy loams, loams.	0.6
5	Silt loams that are porous and have well developed structure.	0.45
6	Other silt loams, sandy clay loams, clay loams, silty clay loams.	0.2

¹ Compacted soils, cemented soils, and/or poor soil structure may require a reduction of the loading rate or make the soil unsuitable for conventional OSS systems.

² Very gravelly = >35% and <60% gravel and coarse fragments, by volume.

³ Extremely gravelly = >60% gravel and coarse fragments, by volume.

⁴ Due to the highly permeable nature of type 1A soil, only alternative systems which meet or exceed Treatment Standard 2 can be installed. However, a conventional gravity system may be used if it meets all criteria listed under (h) of this subsection. The loading rate for these systems is provided in the appropriate guideline.

⁵ The maximum loading rate listed for the soil described as the nongravel portion is to be used for calculating the absorption surface area required. The value is to be determined from this table.

(ii) The bottom of a SSAS shall not be deeper than three feet below the finished grade, except under special conditions

approved by the local health officer. The depth of such system shall not exceed ten feet from the finished grade;

(iii) The sidewall below the invert of the distribution pipe is located in original, undisturbed soil;

(iv) Clean gravel, covered with a geotextile; and

(v) A cover of between six and twenty-four inches of mineral soil containing no greater than ten percent organic content over the gravel to preclude accumulation of water over the drainfield.

(1) For other features, conventional gravity systems shall conform with the "*Design Manual: On-site Wastewater Treatment and Disposal Systems*," United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 (available upon written request to the department) except where modified by, or in conflict with this section or local regulations.

(3) When proposing the use of OSS for nonresidential sewage, the designer shall provide to the local health officer:

(a) Information to show the sewage is not industrial wastewater;

(b) Information to establish the sewage's strength and identify chemicals found in the sewage that are not found in residential sewage; and

(c) A design providing treatment equal to that required of residential sewage.

(4) The local health officer or department:

(a) Shall approve only OSS designs meeting the requirements of this chapter;

(b) Shall only permit the use of septic tanks, pump chambers, and holding tanks on the approved list under subsection (5)(d) of this section;

(c) Shall not approve designs for:

(i) Cesspools;

(ii) Seepage pits, except as allowed for repairs under WAC 246-272-16501(3); or

(iii) Conventional gravity systems or conventional pressure distribution systems in soil type 1A, except when an applicant meets all criteria established by subsection (2)(h) of this section.

(d) May approve a design for the reserve area different than the design approved for the initial OSS, if both designs meet the requirements of this chapter for new construction; and

(e) May allow the hydraulic loading rate calculated for the infiltration surface area in a disposal component to include six inches of the SSAS sidewall height for determining design flow where total recharge by annual precipitation and irrigation is less than twelve inches per year.

(5) The department shall:

(a) Develop and maintain design and construction standards for septic tanks, pump chambers, and holding tanks.

(b) Review septic tanks, pump chambers, and holding tanks, approving those satisfying the design and construction standards developed by the department.

(c) Require an annual report from the manufacturers or distributors of all products on the approved list under (d) of this subsection which assures that the product still meets the standards defined in this section, before relisting the product.

(d) Maintain a list of approved septic tanks, pump chambers, holding tanks that meet design and construction standards.

(e) Make periodic checks of products approved under this subsection.

(6) Persons desiring to manufacture or distribute septic tanks, pump chambers, holding tanks for use in an OSS shall:

(a) Certify the product meets standards for subsection (5)(a) of this section and submit the required documentation to the department for approval when:

(i) The manufacturer or distributor needs initial departmental review and listing to allow permitting by the local health officer or department;

(ii) The department amends the applicable criteria or standards; or

(iii) The manufacturer or distributor alters the product;

(b) Submit an annual report acceptable to the department to retain departmental approval; and

(c) Pay required fees to the department.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-11501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-12501 Holding tank sewage systems.

(1) Persons shall not install or use holding tank sewage systems for residential development or expansion of residences, whether seasonal or year-round, except as set forth under subsection (2) of this section.

(2) The local health officer may approve installation of holding tank sewage systems only:

(a) For permanent uses limited to controlled, part-time, commercial usage situations, such as, recreational vehicle parks and trailer dump stations.

(b) For interim uses limited to handling of emergency situations.

(c) For repairs as permitted under WAC 246-272-16501 (1)(c)(i).

(3) A person proposing to use a holding tank sewage system shall:

(a) Follow established design criteria established by the department;

(b) Submit a management program to the local health officer assuring ongoing operation and maintenance before the local health officer issues the installation permit; and

(c) Use a holding tank on the current approved list under WAC 246-272-11501 (5)(d).

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-12501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-13501 Installation. (1) The local health officer and the department shall require approved installers to construct OSS, except as noted under subsection (2) of this section.

(2) The local health officer may allow the resident owner of a single family residence to install the OSS for that single family residence when: The OSS is either located on the same lot as the residence or situated on adjoining property controlled by the owner and legally listed as an encumbrance.

(3) The installer described by either subsection (1) or (2) of this section shall:

(a) Follow the approved design;

- (b) Have the approved design in possession during installation;
- (c) Only install septic tanks, pump chambers, and holding tanks approved by the department;
- (d) Be on the site at all times during the excavation and construction of the OSS;
- (e) Install the OSS to be watertight, except for the disposal component;
- (f) Cover the installation only after the local health officer has given approval to cover; and
- (g) Back fill and grade the site to prevent surface water from accumulating over any component of the OSS.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-13501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-14501 Inspection. (1) The local health officer shall:

- (a) Visit the OSS site during the site evaluation, construction, or final construction inspection;
- (b) Either inspect the OSS before cover or allow the designer of the OSS to perform the inspection before cover if:
 - (i) The designer is qualified; and
 - (ii) The designer is not also named as installer of the system; and

(iii) A qualified installer installed the OSS.

(c) Keep the "as-built" or "record" drawings on file.

(2) The person responsible for the final construction inspection shall:

(a) Assure the OSS meets the approved design; and

(b) Direct the person responsible for final cover of the system to place a permanent marker at finished grade where needed to identify the location of the septic tank's first manhole.

(3) The designer or installer, as directed by the local health officer, upon completion of the OSS shall develop and submit a complete and detailed, "as-built" or "record drawing" to both the health officer and the OSS owner that include:

(a) For new OSS, measurements to existing site features enabling the first tank manhole to be easily located, and a dimensioned reserve area; and

(b) For repaired or altered OSS, the new, repaired, or altered components with their relationship to the existing system.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-14501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-15501 Operation and maintenance.

(1) The OSS owner is responsible for properly operating and maintaining the OSS, and shall:

(a) Determine the level of solids and scum in the septic tank once every three years;

(b) Employ an approved pumper to remove the septage from the tank when the level of solids and scum indicates that removal is necessary;

(c) Protect the OSS area and the reserve area from:

(i) Cover by structures or impervious material;

(ii) Surface drainage;

(iii) Soil compaction, for example by vehicular traffic or livestock; and

(iv) Damage by soil removal and grade alteration;

(d) Keep the flow of sewage to the OSS at or below the approved design both in quantity and waste strength;

(e) Operate and maintain alternative systems as directed by the local health officer; and

(f) Direct drains, such as footing or roof drains, away from the area where the OSS is located.

(2) The local health officer shall:

(a) Provide operation and maintenance information to the OSS owner upon approval of any installation, repair, or alteration of an OSS; and

(b) Develop and implement plans to:

(i) Monitor all OSS performance within areas of special concern;

(ii) Initiate periodic monitoring of each OSS no later than January 1, 2000, to assure that each OSS owner properly maintains and operates the OSS in accordance with this section and in accordance with other applicable operation and maintenance requirements.

(iii) Disseminate relevant operation and maintenance information to OSS owners through effective means routinely and upon request; and

(iv) Assist in distributing educational materials to OSS owners.

(3) Persons shall not:

(a) Use or introduce strong bases, acids or chlorinated organic solvents into an OSS for the purpose of system cleaning;

(b) Use a sewage system additive unless it is specifically approved by the department; or

(c) Use an OSS to dispose of waste components atypical of residential wastewater.

(4) The local health officer shall require annual inspections of OSS serving food service establishments and may require pumping as needed.

(5) The local health officer may require the owner of the OSS to:

(a) Use one or more of the following management methods or another method consistent with the following management methods for proper operation and maintenance:

(i) Obtain and comply with the conditions of a renewable or operational permit;

(ii) Employ a public entity eligible under Washington state statutes to, directly or indirectly, manage the OSS; or

(iii) Employ a private management entity, guaranteed by a public entity eligible under Washington state statutes or sufficient financial resources, to manage the OSS;

(b) Evaluate any effects the OSS may have on ground water or surface water; and/or

(c) Dedicate easements for inspections, maintenance, and potential future expansion of the OSS.

(6) Persons may obtain a handbook with material outlining management methods to achieve proper operation, maintenance, and monitoring of OSS from the department one year after the effective date of this chapter.

(7) The local health officer may require installation of observation ports in each individual lateral or bed which extend from the bottom of the gravel to the finished grade for monitoring OSS performance.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-15501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-16501 Repair of failures. (1) When an OSS failure occurs, the OSS owner shall:

- (a) Repair or replace the OSS with a conforming system or a Table VI repair either on the:
 - (i) Property served; or
 - (ii) Nearby or adjacent property if easements are obtained; or
 - (b) Connect the residence or facility to a:
 - (i) Publicly owned LOSS; or
 - (ii) Privately owned LOSS where it is deemed economically feasible; or
 - (iii) Public sewer; or
 - (c) Perform one of the following when requirements in (a) or (b) of this subsection are not feasible:
 - (i) Use a holding tank; or
 - (ii) Obtain a National Pollution Discharge Elimination System or state discharge permit from the Washington state department of ecology issued to a public entity or jointly to a public entity and the system owner only when the local health officer determines:
 - (A) An OSS is not feasible; and
 - (B) The only realistic method of final disposal of treated effluent is discharge to the surface of the land or into surface water; or
 - (iii) Abandon the property.
- (2) Prior to replacing or repairing the effluent disposal component, the OSS owner shall develop and submit information required under WAC 246-272-09001(1).
- (3) The local health officer shall permit a Table VI repair only when:
 - (a) Installation of a conforming system is not possible; and
 - (b) Connection to either an approved LOSS or a public sewer is not feasible.
 - (4) The person responsible for the design shall locate and design repairs to:
 - (a) Meet the requirements of Table VI if the effluent treatment and disposal component to be repaired or replaced is closer to any surface water, well, or spring that is not used as a public water source as prescribed by the minimum separation required in Table 1 of WAC 246-272-09501(1);

**TABLE VI
REQUIREMENTS FOR REPAIR OR REPLACEMENT OF DISPOSAL COMPONENTS NOT MEETING VERTICAL AND HORIZONTAL SEPARATIONS^{1,2}**

Vertical Separation in feet	Horizontal Separation in Feet ³		
	< 25	25 - 50	> 50 - ≤100
<1	Treatment Standard 1	Treatment Standard 1	Treatment Standard 2 ⁴
1 - 2	Treatment Standard 1	Treatment Standard 2 ⁴	Pressure Distribution
>2	Treatment Standard 2 ⁴	Pressure Distribution	Pressure Distribution

¹ The treatment standards refer to effluent quality before discharge to unsaturated, subsurface soil.
² The local health officer may permit ASTM C-33 sand to be used as fill to prevent direct discharge of treated effluent to ground water, surface water, or upon the surface of the ground.

- ³ The horizontal separation indicated is the distance between the disposal component and the surface water, well, or spring. If the disposal component is up-gradient of a surface water, well, or spring to be used as a potable water source, the next higher standard level of treatment shall apply unless treatment standard 1 is already being met.
- ⁴ Mound systems are not allowed to meet treatment standard 2.
- (b) Protect drinking water sources;
- (c) Prevent the direct discharge of sewage to ground water, surface water, or upon the surface of the ground;
- (d) Meet the horizontal separations under WAC 246-272-09501(1) to public drinking water sources;
- (e) Meet other requirements of this chapter to the maximum extent permitted by the site;
- (f) Maximize the:
 - (i) Vertical separation;
 - (ii) Distance from a well, spring, or suction line; and
 - (iii) Distance to surface water.
- (5) The local health officer shall identify Table VI repair permits for the purpose of tracking future performance.
- (6) An OSS owner receiving a Table VI repair permit from the local health officer shall:
 - (a) Immediately report any failure to the local health officer;
 - (b) Monitor the performance of the OSS according to the "Interim Guidelines for the Application of Treatment Standards 1 & 2, using Alternative On-site Sewage Treatment/Disposal Systems" amended August 4, 1992, (available upon written request to the department of health) and report the results to the local health officer at a minimum frequency of:
 - (i) Quarterly when treatment standard 1 is required; and
 - (ii) Annually when treatment standard 2 is required;
 - (c) Comply with all local and state requirements stipulated on the permit.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-16501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-17501 Expansions. The local health officer or department shall require an on-site sewage system and a reserve area in full compliance with the new system construction standards specified in this chapter for an expansion of a residence or other facility.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-17501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-18501 Abandonment. Persons permanently removing a septic tank, seepage pit, cesspool, or other sewage container from service shall:

- (1) Have the septage removed by an approved pumper;
- (2) Remove or destroy the lid; and
- (3) Fill the void with soil.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-18501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-19501 Septage management. (1) An individual shall be approved by the local health officer as a qualified pumper before removing septage from an OSS.
 (2) Persons removing septage from an OSS shall:

(a) Transport septage or sewage only in vehicles clearly identified with the name of the business and approved by the local health officer;

(b) Record and report septage removal to the local health officer;

(c) Dispose of septage, or apply septage biosolids to land only in a manner consistent with applicable laws.

[Statutory Authority: RCW 43.20.050, 94-09-025, § 246-272-19501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-20501 Developments, subdivisions, and minimum land area requirements. (1) A person proposing the development shall obtain approval from the local health officer prior to any development where the use of OSS is proposed.

(2) The local health officer shall require the following prior to approving any development:

(a) Site evaluations as required under WAC 246-272-11001, excluding subsections (3)(a)(i) and (4)(d);

(b) Where a subdivision with individual wells is proposed:

(i) Configuration of each lot to allow a one hundred-foot radius water supply protection zone to fit within the lot lines; or

(ii) Establishment of a one hundred-foot protection zone around each existing and proposed well site;

(c) Where preliminary approval of a subdivision is requested, provision of at least one soil log per proposed lot, unless the local health officer determines existing soils information allows fewer soil logs;

(d) Determination of the minimum lot size or minimum land area required for the development using Method I and/or Method II:

(i) **METHOD I.** Table VII, Single family residence minimum lot size or minimum land area required per unit volume of sewage, shows the minimum lot size required per single family residence. For developments other than single family residences, the minimum land areas shown are required for each unit volume of sewage.

TABLE VII
MINIMUM LAND AREA REQUIREMENT
SINGLE FAMILY RESIDENCE OR UNIT VOLUME OF SEWAGE

Type of Water Supply	Soil Type (defined by section 11001 of this chapter)					
	1A, 1B	2A, 2B	3	4	5	6
Public	0.5 acre ¹	12,500	15,000	18,000	20,000	22,000
	2.5 acre ²	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
Individual, on each lot	1 acre ¹	1 acre	1 acre	1 acre	2 acres	2 acres
	2.5 acres ²					

1 Due to the highly permeable nature of type 1 soil, only alternative systems which meet or exceed Treatment Standard 2 can be installed.

2 A conventional gravity system in type 1 soil is only allowed if it is in compliance with all conditions listed under WAC 246-272-11501 (2)(h). One of these limiting conditions is a 2.5 acre minimum lot size.

(ii) **METHOD II.** A minimum land area proposal using Method II is acceptable only when the applicant:

(A) Justifies the proposal through a written analysis of the:

- (I) Soil type and depth;
- (II) Area drainage, and/or lot drainage;
- (III) Public health impact on ground and surface water quality;
- (IV) Setbacks from property lines, water supplies, etc.;
- (V) Source of domestic water;
- (VI) Topography, geology, and ground cover;
- (VII) Climatic conditions;
- (VIII) Availability of public sewers;
- (IX) Activity or land use, present, and anticipated;
- (X) Growth patterns;
- (XI) Reserve areas for additional subsurface treatment and disposal;
- (XII) Anticipated sewage volume;
- (XIII) Compliance with current planning and zoning requirements;
- (XIV) Possible use of alternative systems or designs;
- (XV) Existing encumbrances, such as listed in WAC 246-272-09001 (1)(c)(v) and 246-272-11001 (2)(a)(vii); and

(2003 Ed.)

(XVI) Any other information required by the local health officer.

(B) Shows development with public water supplies having:

(I) At least twelve thousand five hundred square feet lot sizes per single family residence;

(II) No more than 3.5 unit volumes of sewage per day per acre for developments other than single family residences; and

(C) Shows development with individual water supplies having at least one acre per unit volume of sewage; and

(D) Shows land area under surface water is not included in the minimum land area calculation; and

(e) Regardless of which method is used for determining required minimum lot sizes or minimum land area, submittal to the health officer of information consisting of field data, plans, and reports supporting a conclusion the land area provided is sufficient to:

(i) Install conforming OSS;

(ii) Assure preservation of reserve areas for proposed and existing OSS;

(iii) Properly treat and dispose of the sewage; and

(iv) Minimize public health effects from the accumulation of contaminants in surface and ground water.

(3) The local health officer shall require lot areas of twelve thousand five hundred square feet or larger except when a person proposes:

(a) OSS within the boundaries of a recognized sewer utility having a finalized assessment roll; or

(b) A planned unit development with:

(i) A signed, notarized, and recorded deed covenant restricting any development of lots or parcels above the approved density with the density meeting the minimum land area requirements of subsection (2)(d) of this section;

(ii) A public entity responsible for operation and maintenance of the OSS, or a single individual owning the OSS;

(iii) Management requirements under WAC 246-272-08001 when installing a LOSS; and

(iv) Extinguishment of the deed covenant and higher density development allowed only when the development connects to public sewers.

(4) The local health officer may:

(a) Allow inclusion of the area to the centerline of a road or street right-of-way in a Method II determination under subsection (2)(d)(ii) of this section to be included in the minimum land area calculation if:

(i) The dedicated road or street right-of-ways are along the perimeter of the development;

(ii) The road or street right-of-ways are dedicated as part of the proposed development; and

(iii) Lots are at least twelve thousand five hundred square feet in size.

(b) Require detailed plot plans and OSS designs prior to final approval of subdivision proposals;

(c) Require larger land areas or lot sizes to achieve public health protection;

(d) Prohibit development on individual lots within the boundaries of an approved subdivision if the proposed OSS design does not protect public health by meeting requirements of these regulations; and

(e) Permit the installation of an OSS, where the minimum land area requirements or lot sizes cannot be met, only when all of the following criteria are met:

(i) The lot is registered as a legal lot of record created prior to the effective date of this chapter;

(ii) The lot is outside an area of special concern where minimum land area has been listed as a design parameter necessary for public health protection; and

(iii) The proposed system meets all requirements of these regulations other than minimum land area.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-20501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-21501 Areas of special concern. (1)

The local health officer may investigate and take appropriate action to minimize public health risk in formally designated areas such as:

(a) Shellfish protection districts or shellfish growing areas;

(b) Sole source aquifers designated by the U.S. Environmental Protection Agency;

(c) Areas with a critical recharging effect on aquifers used for potable water as designated under RCW 36.70A.170 (Washington Growth Management Act);

(d) Designated public water supply wellhead protection areas;

(e) Up-gradient areas directly influencing water recreation facilities designated for swimming in natural waters with artificial boundaries within the waters as described by the Water Recreation Facilities Act, chapter 70.90 RCW;

(f) Areas designated by the department of ecology as special protection areas under WAC 173-200-090, water quality standards for ground waters of the state of Washington;

(g) Wetland areas under production of crops for human consumption;

(h) Frequently flooded areas delineated by the Federal Emergency Management Agency; and

(i) Areas identified and delineated by the local board of health in consultation with the department to address public health threat from on-site systems.

(2) The permit issuing authority may impose more stringent requirements on new development and corrective measures to protect public health upon existing developments in areas of special concern, including:

(a) Additional location, design, and/or performance standards for OSS;

(b) Larger land areas for new development;

(c) Prohibition of development;

(d) Additional operation, maintenance, and monitoring of OSS performance;

(e) Requirements to upgrade existing OSS;

(f) Requirements to abandon existing OSS; and

(g) Monitoring of ground water or surface water quality.

(3) Within areas of special concern, to reduce risk of system failures, a person approved or designated by the local health officer shall:

(a) Inspect every OSS at least once every three years;

(b) Submit the following written information to both the local health officer and the property owner within thirty days following the inspection:

(i) Location of the tank;

(ii) Structural condition of the tank, including baffles;

(iii) Depth of solids in tank;

(iv) Problems detected with any part of the system;

(v) Maintenance needed;

(vi) Maintenance provided at time of inspection; and

(vii) Other information as required by the local health officer.

(c) Immediately report failures to the local health officer.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-21501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-22501 Certification of designers, installers, pumpers, inspectors, and maintenance personnel. Guidelines defining qualifications for designers, installers, pumpers, inspectors and maintenance personnel shall be established by the department. The guidelines shall include, but not be limited to education, experience, testing, and certification.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-22501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-23501 Technical review committee. The department shall:

(1) Maintain a committee consisting of a maximum of nine individuals with technical or scientific knowledge applicable to OSS whose purpose is to provide technical advice to the department; and

(2) Select members for the technical review committee from:

- (a) Local health departments;
 - (b) Engineering firms;
 - (c) The department of ecology;
 - (d) Land sales, development and building industries;
 - (e) Public sewer utilities;
 - (f) On-site sewage system design and installation firms;
 - (g) Environmental organizations;
 - (h) University/college academic communities;
 - (i) On-site sewage system or related product manufacturers; and
 - (j) Other interested organizations or groups.
- (3) Convene meetings as needed.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-23501, filed 4/15/94, effective 1/1/95.]

WAC 246-272-24001 State advisory committee. The department shall:

- (1) Maintain an on-site sewage advisory committee to:
 - (a) Make recommendations concerning departmental policy and regulations;
 - (b) Review program services; and
 - (c) Provide input to the department regarding the on-site sewage program;
- (2) Select members from agencies, professions, organizations having knowledge and interest in OSS, and groups which are affected by the regulations; and
- (3) Convene meetings as needed.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-24001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-25001 Waiver of state regulations. (1) For individual, site-by-site waiver requests, if concurrence is granted by the department, the local health officer may grant a waiver from specific requirements in this chapter for OSS under three thousand five hundred gallons per day only after the following procedure has been completed:

- (a) The applicant submits a waiver application to the local health officer, including justification describing how the requested waiver is consistent with purpose and objectives to meet the public health intent of this chapter;
- (b) If the local health officer determines that the waiver is consistent with the standards in and the intent of this chapter;
- (c) On a quarterly basis, the local health officer will forward to the department any approved or denied waivers for their records.

(2) The department may grant a waiver from specific requirements in this chapter for a LOSS if a person submits a completed departmental waiver application and required fee to the department, including justification showing the requested waiver is consistent with the LOSS standards in this chapter, and is consistent with the purpose and objectives of this chapter to assure public health protection.

(2003 Ed.)

(3) If an applicant desires to modify and resubmit a previously denied waiver request, the process described above in subsection (1) of this section for OSS under three thousand five hundred gallons per day, or subsection (2) of this section for a LOSS shall be followed again.

[Statutory Authority: RCW 43.20.050. 95-09-018, § 246-272-25001, filed 4/11/95, effective 5/12/95; 94-09-025, § 246-272-25001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-26001 Enforcement. (1) The department or the local health officer:

- (a) Shall enforce the rules of chapter 246-272 WAC; or
- (b) May refer cases within their jurisdiction to the local prosecutor's office or office of the attorney general, as appropriate.

(2) When a person violates the provisions under this chapter, the department, local health officer, local prosecutor's office, or office of the attorney general may initiate enforcement or disciplinary actions, or any other legal proceeding authorized by law, including but not limited to any one or a combination of the following:

- (a) Informal administrative conferences, convened at the request of the department or owner, to explore facts and resolve problems;
 - (b) Orders directed to the owner and/or operator of the OSS and/or person causing or responsible for the violation of the rules of chapter 246-272 WAC;
 - (c) Denial, suspension, modification, or revocation of permits, approvals, or certification; and
 - (d) Civil or criminal action.
- (3) Orders authorized under this section include the following:

(a) Orders requiring corrective measures necessary to effect compliance with chapter 246-272 WAC which may include a compliance schedule; and

(b) Orders to stop work and/or refrain from using any OSS or portion of the OSS or improvements to the OSS until all permits, certifications, and approvals required by rule or statute are obtained.

(4) Enforcement orders issued under this section shall:

- (a) Be in writing;
- (b) Name the person or persons to whom the order is directed;
- (c) Briefly describe each action or inaction constituting a violation of the rules of chapter 246-272 WAC, or applicable local code;
- (d) Specify any required corrective action, if applicable;
- (e) Specify the effective date of the order, with time or times of compliance;
- (f) Provide notice of the consequences of failure to comply or repeated violation, as appropriate. Such notices may include a statement that continued or repeated violation may subject the violator to:

(i) Denial, suspension, or revocation of a permit approval, or certification; and/or

(ii) Referral to the office of the county prosecutor or attorney general; and/or

(iii) Other appropriate remedies;

[Title 246 WAC—p. 527]

(g) Provide the name, business address, and phone number of an appropriate staff person who may be contacted regarding an order;

(h) Comply with chapters 43.70 and 34.05 RCW if issued by the department.

(5) Enforcement orders shall be personally served in the manner of service of a summons in a civil action or in a manner showing proof of receipt.

(6) The department shall have cause to deny the application or reapplication for an operational permit or to revoke, suspend, or modify a required operational permit of any person who has:

(a) Failed or refused to comply with the provisions of chapter 246-272 WAC, or any other statutory provision or rule regulating the operation of an OSS; or

(b) Obtained or attempted to obtain a permit or any other required certificate or approval by misrepresentation.

(7) For the purposes of subsection (6) of this section and WAC 246-272-27001, a person is defined to include:

(a) Applicant;

(b) Re-applicant;

(c) Permit holder; or

(d) Any individual associated with (a), (b), or (c) of this subsection including, but not limited to:

(i) Board members;

(ii) Officers;

(iii) Managers;

(iv) Partners;

(v) Association members;

(vi) Agents; and in addition

(vii) Third persons acting with the knowledge of such persons.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-26001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-27001 Notice of decision—Adjudicative proceeding. (1) All local boards of health shall:

(a) Maintain an administrative appeals process to consider procedural and technical conflicts arising from the administration of local regulations; and

(b) Establish rules for conducting hearings requested to contest a local health officer's actions.

(2) The department shall provide notice of a denial, suspension, modification or revocation of a permit, certification, or approval consistent with RCW 43.70.115, chapter 34.05 RCW, and chapter 246-10 WAC.

(3) A person contesting a departmental decision regarding a permit, certificate, approval, or fine may file a written application for an adjudicative proceeding consistent with chapter 246-10 WAC.

(4) Department actions are governed under the Administrative Procedure Act, chapter 34.05 RCW, RCW 43.70.115, this chapter, and chapter 246-10 WAC.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-27001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-28001 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the applica-

tion of the provision to other persons or circumstances shall not be affected.

[Statutory Authority: RCW 43.20.050. 94-09-025, § 246-272-28001, filed 4/15/94, effective 1/1/95.]

WAC 246-272-990 Fees. (1) The minimum fee for required review of larger on-site system's engineering reports and plans and specifications shall be four hundred dollars. If review time exceeds eight hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee. The fee for pre-site inspections for larger on-site systems shall be one hundred dollars per visit. The fee for final inspection of larger on-site systems shall be one hundred dollars per site visit.

(2) The minimum fee for required review of proprietary devices shall be two hundred dollars. If review time exceeds four hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee.

(3) The minimum fee for required review of experimental systems shall be four hundred dollars. If review time exceeds eight hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee.

[Statutory Authority: RCW 43.70.040. 91-02-050 (Order 122), § 246-272-990, filed 12/27/90, effective 1/31/91.]

Chapter 246-273 WAC

ON-SITE SEWAGE SYSTEM ADDITIVES

WAC

246-273-001	Purpose and authority.
246-273-010	Definitions.
246-273-020	Applicability.
246-273-030	Additive review and approval application—Process and requirements.
246-273-040	Review criteria and decision-making procedures.
246-273-050	Ingredients—Prohibitions and conditions.
246-273-060	Unfair practices.
246-273-065	Reregistration.
246-273-070	Confidentiality.
246-273-080	Enforcement.
246-273-990	Fees.

WAC 246-273-001 Purpose and authority. (1) This chapter establishes the review, criteria and decision-making procedures for evaluating on-site sewage disposal system additives to determine whether individual additives have an adverse effect on public health or water quality.

(2) The Washington state department of health administers this chapter under the authority and requirements of chapter 70.118 RCW.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-001, filed 12/1/95, effective 1/1/96.]

WAC 246-273-010 Definitions. "Additive" means a commercial product intended to affect the performance or aesthetics of an on-site sewage disposal system.

"Additive manufacturer" means any person who manufactures, formulates, blends, packages, or repackages an additive product for sale, use, or distribution within Washington state.

"Approved" means a written statement of acceptability, in terms of the requirements of this chapter, issued by the Washington state department of health.

"Chemical additive" means those additives containing acids, bases, or other chemicals deemed unsafe by the department for use in an on-site sewage disposal system. Chemicals identified as unsafe are specified in WAC 246-273-050.

"Department" means the Washington State Department of Health, P.O. Box 47826, Olympia, Washington 98504-7826.

"Failure" means:

- Effluent has been discharged on the surface of the ground prior to approved treatment; or
- Effluent has percolated to the surface of the ground; or
- Effluent has contaminated or threatens to contaminate a ground water supply.

"On-site sewage disposal system" means any system of piping, treatment devices, or other facilities that convey, store, treat, or dispose of sewage on the property where it originates or on nearby property under the control of the user where the system is not connected to a public sewer system. For purposes of this chapter, an on-site sewage disposal system does not include indoor plumbing and associated fixtures.

"Person" means any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of any such entities.

"Sewage" means any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-010, filed 12/1/95, effective 1/1/96.]

WAC 246-273-020 Applicability. (1) After July 1, 1994, no person shall use, sell, or distribute an on-site sewage disposal system chemical additive in Washington state.

(2) After January 1, 1996, no person shall use, sell or distribute an on-site sewage disposal system additive whose ingredients have not been approved by the department in accordance with requirements of chapter 70.118 RCW and this chapter.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-020, filed 12/1/95, effective 1/1/96.]

WAC 246-273-030 Additive review and approval application—Process and requirements. (1) Manufacturers desiring to sell, advertise, or distribute an on-site sewage disposal system additive for use in Washington state must request and obtain departmental review and approval of their product(s) by submitting a complete application, including:

- (a) Comprehensive, yet concise, response to the questionnaire (see subsection (3) of this section);
- (b) A product sample in the labeled container intended for sale or distribution;
- (c) The on-site sewage disposal system additive evaluation fee described in WAC 246-273-990.

(2) All submitted material (written responses and other materials) must be legible, typed or printed. Hand-written responses to the application questions or hand-written notes

(2003 Ed.)

or other submitted documentation may, at the discretion of the department, result in rejection of the application.

(3) The questionnaire for review and approval of an on-site sewage disposal system additive consists of four parts: Applicant information, product information, product literature, and certification. All applicants must provide complete written responses to the following questions:

Applicant information (AI)

- (AI-1) Applicant name, mailing address, street address, city/town, state, zip code, telephone and FAX, with area code, time zone. The applicant must be vested with the authority to represent the manufacturer in this capacity.
- (AI-2) Contact individual (if different from person in Item 1) name, mailing address, street address, city/town, state, zip code, telephone and FAX, with area code, time zone.
- (AI-3) Manufacturing facility location/address, mailing address, street address, city/town, state, zip code.
- (AI-4) Name of on-site sewage disposal system additive product. (One product per application. If identical formulations of product are marketed under different product names or distributor labels, list them here. If product formulations vary, submit separate applications for each product.)
- (AI-5) List of firms, companies, or persons distributing the on-site sewage disposal system additive product in Washington state. Do not list product retailers. Provide the following information for each: Contact person name, mailing address, street address, city/town, state, zip code, telephone and FAX, with area code, time zone.

Product information (PI)

- (PI-1) List all physical, chemical, biological, or other agents which make up the additive and provide toxicity information for each component (provide material safety data sheet, if possible). Provide trade and scientific name and formula of chemical agents. Specify trade and scientific name(s) of bacteria and enzymes, and characterization (origin, native occurrence, pathogenicity, etc.). Report formulation in "% by weight," including inert and active ingredients, and trace amounts, if any, of prohibited ingredients (WAC 246-273-050).
- (PI-2) Describe the anticipated use of the additive in the on-site sewage system. Include in the description where and how the product is to be applied, the frequency of application, who will perform the application, and the amount and/or concentration of the product per application. For additives with chemical constituents, indicate the amount and/or concentration of each chemical constituent applied and resulting from application of the product.
- (PI-3) Describe the function of the additive within the on-site sewage disposal system and explain in detail how the additive achieves this function.
- (PI-4) List all known reactions and by-products produced by the use of the additive including:
 - The product's effect on bacteria normally found in a septic tank or aerobic treatment device and the soil

[Title 246 WAC—p. 529]

surrounding a subsurface drainfield, and in the treatment media of a sand filter or sand mound system; and

- pH range adjustment in all parts of an on-site sewage disposal system.

- (PI-5) Provide any known or projected limitation on the use of the on-site sewage disposal system additive.
- (PI-6) Provide reports of any available studies on the use of the on-site sewage disposal system additive to support the responses to questions PI-1 through PI-5 and to demonstrate the product's safety (lack of harm) to the public health, water quality, on-site sewage system components and function. Include monitoring reports and data from actual field or laboratory-based on-site sewage system studies.
- (PI-7) Attach any formal approvals or other acceptances from other jurisdictions (private sector, state, or federal) for use of the on-site sewage disposal system additive.

Product literature (PL)

- (PL-1) Attach single copies of sewage system additive product marketing, sales, distribution, advertising literature/materials intended for use in Washington state, not otherwise submitted as part of the complete application.

Certification (C)

- (C-1) The following statement must be included as part of a complete application:
"I certify that I represent (INSERT MANUFACTURING COMPANY NAME), that I am authorized to prepare, or direct the preparation of, this application, and that the product presented for review and approval contains no prohibited ingredients (WAC 246-273-050). I attest, under penalty of law, that this document and all attachments, to the best of my knowledge and belief, are true, accurate, and complete."
- (C-2) Lines or space must be provided for the applicant's signature, printed name of preparer (if different than the applicant), preparer's signature (if needed) and date.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-030, filed 12/1/95, effective 1/1/96.]

WAC 246-273-040 Review criteria and decision-making procedures. The department shall:

- (1) Upon receipt of an application for review and approval of an on-site sewage disposal system additive:

(a) Determine if the application is complete. The department may return incomplete applications, suspending further review until a completed application is submitted. Processing time period begins anew with resubmittal.

(b) Notify the applicant, in writing, that the completed application has been received, and inform the applicant of the anticipated time period for review. A decision of either approval or denial shall be made within forty-five calendar days of receiving a complete application.

(2) Upon review of a complete application, grant or deny approval of the on-site sewage disposal system additive for use, sale, or distribution in Washington state, informing the

applicant, in writing, of either approval or denial of the application. Notice of denial shall include explanation of the reason(s) for denial.

- (3) Evaluate the request for approval of an on-site sewage disposal system additive according to the following criteria:

(a) Does the additive contain any ingredients deemed unsafe by the department? If yes, the application for approval shall be denied.

(b) Does the additive contain acids or bases that raise or lower the pH of the contents of a septic tank, or wastewater in any other portion of an on-site sewage disposal system, outside of a pH range between 6.0 - 8.0? If yes, the application for approval shall be denied.

(c) Would use of the additive (when applied according to the manufacturer's product-use instructions) adversely affect public health or water quality (surface water or ground water) by either the nature of the ingredients or the effect of the additive on the function of the on-site sewage system? If yes, the application for approval shall be denied.

(d) If the review according to the criteria listed above determines that none of these questions are answered "yes," the on-site sewage disposal system additive shall be approved.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-040, filed 12/1/95, effective 1/1/96.]

WAC 246-273-050 Ingredients—Prohibitions and conditions. (1) The following substances and compounds shall not be ingredients of approved on-site sewage disposal system additives. Trace amounts of these substances and compounds may exist in approved on-site sewage disposal system additives if deemed safe by the department for use in an on-site sewage disposal system.

(a) Any substance or compound listed as an EPA toxic pollutant in Title 40 Code of Federal Regulations (CFR 40) 1994, Part 122, Tables II, III, and V of Appendix D:

Table II—Organic Toxic Pollutants In Each Of Four Fractions In Analysis By Gas Chromatography/Mass Spectroscopy (GS/MS)

<i>Volatiles</i>	
IV	acrolein
2V	acrylonitrile
3V	benzene
5V	bromoform
6V	carbon tetrachloride
7V	chlorobenzene
8V	chlorodibromomethane
9V	chloroethane
10V	2-chloroethylvinyl ether
11V	chloroform
12V	dichlorobromomethane
14V	1.1-dichloroethane
15V	1.2-dichloroethane
16V	1.1-dichloroethylene
17V	1.2-dichloropropane
18V	1.3-dichloropropylene
19V	ethylbenzene

20V	methyl bromide	36B	hexachloroethane
21V	methyl chloride	37B	indeno(1,2,3-cd)pyrene
22V	methylene chloride	38B	isophorone
23V	1,1,2,2-tetrachloroethane	39B	naphthalene
24V	tetrachloroethylene	40B	nitrobenzene
25V	toluene	41B	N-nitrosodimethylamine
26V	1,2-trans-dichloroethylene	42B	N-nitrosodi-n-propylamine
27V	1,1,1-trichloroethane	43B	N-nitrosodiphenylamine
28V	1,1,2-trichloroethane	44B	phenanthrene
29V	trichloroethylene	45B	pyrene
31V	vinyl chloride	46B	1,2,4-trichlorobenzene
<i>Acid Compounds</i>		<i>Pesticides</i>	
1A	2-chlorophenol	1P	aldrin
2A	2,4-dichlorophenol	2P	alpha-BHC
3A	2,4-dimethylphenol	3P	beta-BHC
4A	4,6-dinitro-o-cresol	4P	gamma-BHC
5A	2,4-dinitrophenol	5P	delta-BHC
6A	2-nitrophenol	6P	chlordane
7A	4-nitrophenol	7P	4,4'-DDT
8A	p-chloro-m-cresol	8P	4,4'-DDE
9A	pentachlorophenol	9P	4,4'-DDD
10A	phenol	10P	dieldrin
11A	2,4,6-trichlorophenol	11P	alpha-endosulfan
<i>Base/Neutral</i>		12P	beta-endosulfan
1B	acenaphthene	13P	endosulfan sulfate
2B	acenaphthylene	14P	endrin
3B	anthracene	15P	endrin aldehyde
4B	benzidine	16P	heptachlor
5B	benzo(a)anthracene	17P	heptachlor epoxide
6B	benzo(a)pyrene	18P	PCB-1242
7B	3,4-benzofluoranthene	19P	PCB-1254
8B	benzo(ghi)perylene	20P	PCB-1221
9B	benzo(k)fluoranthene	21P	PCB-1232
10B	bis(2-chloroethoxy)methane	22P	PCB-1248
11B	bis(2-chloroethyl)ether	23P	PCB-1260
12B	bis(2-chloroisopropyl)ether	24P	PCB-1016
13B	bis(2-ethylhexyl)phthalate	25P	toxaphene
14B	4-bromophenyl phenyl ether		
15B	butylbenzyl phthalate		
16B	2-chloronaphthalene		
17B	4-chlorophenyl phenyl ether		
18B	chrysene		
19B	dibenzo(a,h)anthracene		
20B	1,2-dichlorobenzene		
21B	1,3-dichlorobenzene		
22B	1,4-dichlorobenzene		
23B	3,3'-dichlorobenzidine		
24B	diethyl phthalate		
25B	dimethyl phthalate		
26B	di-n-butyl phthalate		
27B	2,4-dinitrotoluene		
28B	2,6-dinitrotoluene		
29B	di-n-octyl phthalate		
30B	1,2-diphenylhydrazine (as azobenzene)		
31B	fluoranthene		
32B	fluorene		
33B	hexachlorobenzene		
34B	hexachlorobutadiene		
35B	hexachlorocyclopentadiene		

Table III-Other Toxic Pollutants (Metals and Cyanide) and Total Phenols

Antimony, Total
 Arsenic, Total
 Beryllium, Total
 Cadmium, Total
 Chromium, Total
 Copper, Total
 Lead, Total
 Mercury, Total
 Nickel, Total
 Selenium, Total
 Silver, Total
 Thallium, Total
 Zinc, Total
 Cyanide, Total
 Phenols, Total

**Table IV-Toxic Pollutants and Hazardous Substances
Required To Be Identified By Existing Dischargers If
Expected To Be Present**

Toxic Pollutants

Asbestos

Hazardous Substances

Acetaldehyde
Allyl alcohol
Allyl chloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlorpyrifos
Coumaphos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D(2,4-Dichlorophenoxy acetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone
2,2-Dichloropropionic acid
Dichlorvos
Diethyl amine
Dimethyl amine
Dinitrobenzene
Diquat
Disulfoton
Diuron
Epichlorohydrin
Ethion
Ethylene diamine
Ethylene dibromide
Formaldehyde
Furfural
Guthion
Isoprene
Isopropanolamine
Dodecylbenzenesulfonate
Kelthane
Kepone
Malathion
Mercaptodimethur
Methoxychlor
Methyl mercaptan
Methyl methacrylate
Methyl parathion
Mevinphos
Mexacarbate
Monoethyl amine
Monomethyl amine

Naled
Naphthenic acid
Nitrotoluene
Parathion
Phenolsulfanate
Phosgene
Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
Styrene
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)
TDE (Tetrachlorodiphenylethane)
2,4,5-TP (2-(2,4,5-Trichlorophenoxy
propanoic acid)
Trichlorofan
Triethanolamine
Dodecylbenzenesulfonate
Triethylamine
Trimethylamine
Uranium
Vanadium
Vinyl acetate
Xylene
Xylenol
Zirconium

(b) Other chemicals deemed by the department to be detrimental to on-site sewage disposal system function, public health, or water quality.

(2) The department may prohibit (not approve on-site sewage system additives containing) acids and bases depending upon the effect on public health or ground water of their concentration when applied according to the manufacturer's product-use instructions.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-050, filed 12/1/95, effective 1/1/96.]

WAC 246-273-060 Unfair practices. Manufacturers of approved additives advertised, sold, or distributed in Washington state shall:

(1) Make no claims relating to the elimination of the need for septic tank pumping or proper septic tank maintenance;

(2) List the components of additive products on the product label, along with information regarding instructions for use and precautions;

(3) Make no false statements, design, or graphic representation relative to an additive product that is inconsistent with RCW 70.118.060, 70.118.070, or 70.118.080; and

(4) Make no claims, either direct or implied, about the performance of the product based on state approval of its ingredients.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-060, filed 12/1/95, effective 1/1/96.]

WAC 246-273-065 Reregistration. Reregister, by written correspondence to the department, their on-site sewage disposal system additive product(s) each time the product formulation changes. The department may require a new review and approval for reregistration of products that undergo formulation changes.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-065, filed 12/1/95, effective 1/1/96.]

WAC 246-273-070 Confidentiality. (1) Manufacturers shall submit a signed confidentiality statement if any information submitted would, if made public, divulge confidential business information, methods, or processes entitled to protection as trade secrets of the manufacturer, and identify any such information.

(2) The department shall not disclose any information obtained from manufacturers, when stated by the manufacturer, that the information, if made public, would divulge confidential business information, methods or processes entitled to protection as trade secrets of the manufacturer.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-070, filed 12/1/95, effective 1/1/96.]

WAC 246-273-080 Enforcement. (1) The attorney general, or appropriate city or county prosecuting attorney may bring appropriate action to enjoin any violation of the:

(a) Prohibition on the sale or distribution of on-site sewage disposal system additives; or

(b) Conditions of RCW 70.118.080 Additives—Unfair practices, and WAC 246-273-060 (1) through (4).

(2) The department may rescind approval of an on-site sewage disposal system additive in response to:

(a) Demonstrated link to on-site sewage disposal system failure resulting from use (consistent with the manufacturer's product-use instructions) of an approved additive; or

(b) Documentation that ingredients or formulation of an approved on-site sewage system additive differs from the ingredients or formulation information submitted for review, and upon which departmental approval was granted.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-080, filed 12/1/95, effective 1/1/96.]

WAC 246-273-990 Fees. (1) The applicant shall pay to the department, with the application, a three hundred fifty dollar fee. This fee includes two hundred dollars for developing criteria and review procedures, plus one hundred fifty dollars for up to two hours of product-specific review. Additional review time will be billed at seventy-five dollars per hour.

(2) All fees must be paid prior to the departments' approval.

[Statutory Authority: Chapter 70.118 RCW and RCW 43.70.040. 95-24-062, § 246-273-990, filed 12/1/95, effective 1/1/96.]

Chapter 246-280 WAC RECREATIONAL SHELLFISH BEACHES

WAC

246-280-001 Authority, purpose, and scope.
246-280-010 Definitions.

(2003 Ed.)

246-280-015 General administration.
246-280-020 Recreational shellfish beach classification.
246-280-030 Water quality criteria and standards.
246-280-060 Recreational shellfish beach sanitary survey.
246-280-070 PSP monitoring of recreational beaches.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-280-040 Marine water quality testing. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-280-040, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW. 89-20-020 (Order 335), § 248-52-040, filed 9/27/89, effective 10/28/89.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

246-280-050 Shellfish meat quality standards and testing. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-280-050, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW. 89-20-020 (Order 335), § 248-52-050, filed 9/27/89, effective 10/28/89.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

246-280-080 Public information and notification. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-280-080, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW. 89-20-020 (Order 335), § 248-52-080, filed 9/27/89, effective 10/28/89.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

WAC 246-280-001 Authority, purpose, and scope. (1) Authority. Under the authority of RCW 43.20.050, powers and duties of state board of health, these regulations are hereby established as minimum requirements for the monitoring and classification of recreational shellfish beaches.

(2) Purpose. It is the purpose of chapter 246-280 WAC to protect public health and establish procedures for evaluating the sanitary quality of recreational shellfish beaches.

(3) Scope.

(a) These regulations shall apply to recreational shellfish beaches under public ownership. Commercial shellfish harvest, even though it may occur on publicly owned beaches, is governed by chapter 246-282 WAC and chapter 69.30 RCW.

(b) These regulations shall apply to recreationally harvested shellfish on privately owned beaches when the general public has unlimited access to beaches for recreational shellfishing. The department may evaluate and monitor these privately owned beaches if the department determines it to be in the public interest.

(4) Other statutes related to this chapter are:

(a) Chapter 69.30 RCW, sanitary control of shellfish; and

(b) Chapter 246-282 WAC, sanitary control of shellfish.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-280-001, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-280-001, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW. 89-20-020 (Order 335), § 248-52-001, filed 9/27/89, effective 10/28/89.]

WAC 246-280-010 Definitions. (1) Abbreviations:

(a) "ml" means milliliter; and

(b) "PSP" means paralytic shellfish poisoning.

(2) "Beach evaluation" means the examination of the sanitary conditions of recreational shellfish beaches through water quality testing, shellfish tissue testing, PSP testing, and sanitary surveys.

[Title 246 WAC—p. 533]

(3) "Beach inventory" means the department's list of recreational shellfish beaches governed by chapter 246-280 WAC.

(4) "Closed classification" means a beach exceeds the standards for safe shellfish harvest.

(5) "Conditionally open classification" means a recreational shellfish beach meets the standards for safe shellfish harvest during well-defined time periods, such as dry weather months, and is closed to shellfish harvest when the standards are exceeded.

(6) "Department" means the Washington state department of health (DOH).

(7) "Emergency closure" means temporary closure of a recreational shellfish beach when a contamination event is suspected of impacting an open or conditionally open beach.

(8) "Geometric mean value" means a statistical calculation giving a mean value of data points. Geometric mean value is a term used in state water quality standards. The calculation is:

(a) $a \times b \times c \times d = y$; and

(b) nth root of y = geometric mean value. N = number of data points which determines the power of the root.

(9) "Health officer" means the health officer or an authorized representative of the city, county, city-county health department or district.

(10) "Local board of health" means the city, town, county, city-county, or district board of health as defined under chapters 70.05, 70.08, and 70.46 RCW.

(11) "Open classification" means a recreational shellfish beach which complies with WAC 246-280-030 standards for safe shellfish harvest without any restrictions due to health hazards.

(12) "Paralytic shellfish poisoning (PSP)" means a human illness caused by eating shellfish that contain high levels of toxin which results from the shellfish consuming large amounts of toxin-producing microscopic marine organism called *Gonyaulax catenella*.

(13) "Public ownership" means owned by the federal government, state government, a county, a city, or a port district.

(14) "Recreational shellfish beach" means any beach under public ownership available to the public and any privately owned beach where the general public has unlimited access to recreationally harvest shellfish.

(15) "Recreational shellfish harvest" means to harvest shellfish for personal consumption with no intention for sale or barter.

(16) "Sanitary survey" means an evaluation of the sanitary conditions of the shoreline and uplands of a recreational shellfish beach.

(17) "Shellfish" means, for the purposes of chapter 246-280 WAC, all varieties of oysters, clams, mussels, and scallops.

(18) "Unclassified" means a recreational shellfish beach which does not have an initial classification because the department has incomplete sanitary survey data.

(19) "Water quality study" means an evaluation of the sanitary conditions of the marine water of a recreational shellfish beach described under WAC 246-280-030 and 246-280-040.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-280-010, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-280-010, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW. 89-20-020 (Order 335), § 248-52-005, filed 9/27/89, effective 10/28/89.]

WAC 246-280-015 General administration. (1) The department and the health officer for each local health jurisdiction shall develop a joint plan of operation designating the roles of each agency for administering chapter 246-280 WAC. This plan shall:

(a) Specifically designate those recreational shellfish beaches included in the joint plan;

(b) Establish whether the department or the health officer shall assume primary responsibility for an identified beach;

(c) Provide for a minimum acceptable frequency of beach evaluation;

(d) Specify who has responsibility for water quality studies, sanitary surveys, PSP monitoring, beach classification, and public notification;

(e) Be signed by the secretary and the chairperson of the local board of health;

(f) Be updated as needed to ensure proper operation of the plan; and

(g) Identify a process for implementing remedial actions to correct pollution sources where deemed appropriate by the department for those beaches classified as closed or conditionally open.

(2) If the local board of health adopts rules governing recreational shellfish harvest within its jurisdiction, the adopted rules shall be consistent with chapter 246-280 WAC.

(3) The department shall develop guidelines on water quality monitoring, PSP monitoring, shoreline survey procedures, public information/notification, and other topics.

(4) Throughout this chapter, the term "health officer" may be substituted for the term "department" if the joint plan of operation delegates authority for action to the health officer.

[Statutory Authority: RCW 43.20.050. 92-02-019 (Order 225B), § 246-280-015, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-280-015, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW. 89-20-020 (Order 335), § 248-52-010, filed 9/27/89, effective 10/28/89.]

WAC 246-280-020 Recreational shellfish beach classification. (1) The department or the health officer for each local health jurisdiction as designated in the joint plan of operation, under WAC 246-280-015, shall classify recreational shellfish beaches, based on the risk to public health from consuming shellfish. After completing an initial classification, the department or the health officer for each local health jurisdiction shall make an annual update based on the additional data collected during the year.

(2) The joint plan of operation's criteria used to classify beaches shall include the following:

(a) Water quality data;

(b) A sanitary survey of pollution sources; and

(c) A review of natural and synthetic toxins, including PSP.

(3) The department shall classify recreational shellfish beaches as follows:

- (a) Open;
- (b) Conditionally open;
- (c) Closed;
- (d) Emergency closure; and
- (e) Unclassified.

[Statutory Authority: RCW 43.20.050, 92-02-019 (Order 225B), § 246-280-020, filed 12/23/91, effective 1/23/92; 91-02-051 (Order 124B), recodified as § 246-280-020, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW, 89-20-020 (Order 335), § 248-52-020, filed 9/27/89, effective 10/28/89.]

WAC 246-280-030 Water quality criteria and standards. (1) The department shall classify the beach as open when the following three conditions are met:

(a) The marine water covering a recreational shellfish beach shall not exceed a geometric mean value of fourteen fecal coliform bacteria/100 ml of water. In addition, not more than ten percent of the individual water samples may exceed forty-three fecal coliform bacteria/100 ml of water. The geometric mean value shall be calculated on no less than fifteen samples for each water quality station;

(b) Upon completion of a sanitary survey, there are no major sources of pollution of public health significance identified as affecting the beach; and

(c) Natural and synthetic toxin levels shall not exceed established standards.

(2) The department shall classify the beach as conditionally open when standards for open criteria are met during a well-defined and predictable time period, such as dry weather months. Use of the conditionally open classification shall be limited to beaches where sufficient data are available to establish the beach meets the open criteria for well-defined time periods.

(3) The department shall classify a beach as closed for failing to meet the open or conditionally open standards and the beach shall not be used for recreational shellfish harvest.

(4) The department shall list a recreational shellfish beach as unclassified until complete sanitary data are available. The department shall list initially the beach as unclassified on the beach inventory.

(5) In the event an open or conditionally open beach is suspected of being impacted by a source of pollution or other threat to public health, the department shall implement an emergency closure immediately. The closure shall remain in effect until the department's investigation verifies the beach is safe for recreational shellfish harvesting.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-280-030, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW, 89-20-020 (Order 335), § 248-52-030, filed 9/27/89, effective 10/28/89.]

WAC 246-280-060 Recreational shellfish beach sanitary survey. In addition to the evaluation of the shellfish growing waters, and before establishing a classification for the beach, the department shall conduct a sanitary survey of the shoreline and upland areas located adjacent to recreational shellfish beaches. The sanitary survey shall be updated as necessary to reflect changes in shoreline and upland sanitary conditions. A sanitary survey shall consist of:

(1) Identifying and evaluating point source discharges in the vicinity of the beach;

- (2) Evaluating all on-site sewage disposal systems in the survey area; and
- (3) Evaluating impacts from other nonpoint sources in the area, such as animal waste and storm water.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-280-060, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW, 89-20-020 (Order 335), § 248-52-060, filed 9/27/89, effective 10/28/89.]

WAC 246-280-070 PSP monitoring of recreational beaches. (1) The department shall conduct a paralytic shellfish poisoning (PSP) monitoring program for recreational shellfish beaches.

(2) The department shall coordinate the monitoring program with the health officer. The joint plan of operation developed between the department and the health officer shall include the following elements:

(a) A sampling schedule which includes the beaches sampled and the frequency of the sampling;

(b) Designation of responsibility for a sample collection; and

(c) A system of establishing beach closures due to PSP which includes:

(i) Closing the beach when the level of toxin exceeds 80 micrograms of toxin per 100 grams of shellfish meat;

(ii) Maintaining the beach closure until two consecutive samples of the same species test below the standard of 80 micrograms of toxin per 100 grams of shellfish meat; and

(iii) Closing beaches suspected of posing a PSP threat to public health when they are located in a PSP-impacted area that cannot be sampled on a frequent basis. The beaches shall remain closed until samples verify the area is safe to reopen.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-280-070, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 90.70 RCW, 89-20-020 (Order 335), § 248-52-070, filed 9/27/89, effective 10/28/89.]

Chapter 246-282 WAC

SANITARY CONTROL OF SHELLFISH

WAC

246-282-001	Scope and purpose.
246-282-005	Minimum performance standards.
246-282-010	Definitions.
246-282-012	Certificates of approval—Operation licenses, harvest site certificates.
246-282-014	Operating provisions.
246-282-016	Aquaculture.
246-282-020	Growing areas.
246-282-032	Relay permit.
246-282-034	Wild seed permit.
246-282-036	Bait permit.
246-282-042	Wet storage permit.
246-282-050	Packing, handling, and storing of shucked shellfish.
246-282-060	Personal health and cleanliness.
246-282-070	Construction and maintenance.
246-282-080	Identification and records.
246-282-082	Export certificate.
246-282-092	Inspection by department.
246-282-100	Notice of decision—Adjudicative proceeding.
246-282-102	Denial, revocation, suspension of license, certificate, or permit—Civil penalties.
246-282-104	Penalty assignment—Calculation of penalty and proportionate adjustment—Aggravating and mitigating factors.
246-282-110	Administrative provisions.
246-282-120	Penalty clause.

246-282-130 Separability clause.
246-282-990 Fees.

**DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER**

246-282-030 Storage, cleansing and washing and shipping of shellstock. [Statutory Authority: RCW 69.30.030, 92-02-019 (Order 225B), § 246-282-030, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-282-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030, 78-08-059 (Order 163), § 248-58-020, filed 7/24/78; Regulation 58.020, effective 3/11/60.] Repealed by 01-04-054, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030 and 43.20.030.

246-282-040 Shucking of shellfish. [Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-282-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030, 78-08-059 (Order 163), § 248-58-030, filed 7/24/78; Regulation 58.030, effective 3/11/60.] Repealed by 01-04-054, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030 and 43.20.030.

246-282-090 Certificate of compliance—Certificate of approval—Suspension for revocation of certificate of approval—Licensure—Revocation of license. [Statutory Authority: RCW 69.30.030, 92-02-019 (Order 225B), § 246-282-090, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-282-090, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030 and 43.20.050, 85-21-048 (Order 296), § 248-58-080, filed 10/14/85. Statutory Authority: RCW 69.30.030, 78-08-059 (Order 163), § 248-58-080, filed 7/24/78; Regulation 58.080, effective 3/11/60.] Repealed by 01-04-054, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030 and 43.20.030.

WAC 246-282-001 Scope and purpose. These requirements, as authorized under chapter 69.30 RCW, establish minimum performance standards for the growing, harvesting, processing, packing, storage, transporting, and selling of shellfish for human consumption. These requirements do not apply to persons who conduct activities limited to:

- (1) Retail food service, in compliance with the requirements of chapter 246-215 WAC, Food service;
- (2) Personal use, in compliance with requirements of chapters 77.32 RCW, Licenses, and 77.15 RCW, Fish and wildlife enforcement code; and
- (3) Transporting as a common carrier of freight.

[Statutory Authority: RCW 69.30.030 and 43.20.030, 01-04-054, § 246-282-001, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-282-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030, 78-08-059 (Order 163), § 248-58-001, filed 7/24/78; Regulation 58.001, effective 3/11/60.]

WAC 246-282-005 Minimum performance standards. (1) Any person engaged in a shellfish operation or possessing a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must comply with and is subject to:

(a) The requirements of the 1999 National Shellfish Sanitation Program (NSSP) Model Ordinance, published by the United States Department of Health and Human Services, Public Health Service, Food and Drug Administration (copies available through the U.S. Food and Drug Administration, Shellfish Sanitation Branch, and the Washington state department of health, office of food safety and shellfish programs);

(b) The provisions of 21 Code of Federal Regulations (CFR), Part 123 - Fish and Fishery Products, adopted December 18, 1995, by the United States Food and Drug Administration, regarding Hazard Analysis Critical Control Point (HACCP) plans (copies available through the U.S. Food and Drug Administration, Office of Seafood, and the Washington state department of health, office of food safety and shellfish programs); and

(c) All other provisions of this chapter.

(2) If a requirement of the NSSP Model Ordinance or a provision of 21 CFR, Part 123, is inconsistent with a provision otherwise established under this chapter or other state law or rule, then the more stringent provision, as determined by the department, will apply.

[Statutory Authority: RCW 69.30.030 and 43.20.030, 01-04-054, § 246-282-005, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030, 98-18-066, § 246-282-005, filed 8/31/98, effective 10/1/98; 98-03-096, § 246-282-005, filed 1/21/98, effective 2/21/98; 96-18-096, § 246-282-005, filed 9/4/96, effective 10/5/96; 94-23-026, § 246-282-005, filed 11/8/94, effective 12/9/94.]

WAC 246-282-010 Definitions. The following definitions, as well as those in the NSSP Model Ordinance, apply in the interpretation and the implementation of these rules and regulations.

(1) "Abatement" means an action or series of actions to eliminate a public health hazard or reduce it to a level acceptable to the secretary.

(2) "Approved" means acceptable to the secretary based on the department's determination as to conformance with appropriate standards and good public health practice.

(3) "Approved laboratory" means a laboratory that is in conformance with requirements of the NSSP Model Ordinance.

(4) "Certificate of approval" means a license issued by the department.

(5) "Civil penalty" means a monetary penalty administratively issued by the secretary. It does not include any criminal penalty; damage assessment; wages, premiums, or taxes owed; or interest or late fees on any existing obligation.

(6) "Commercial quantity" means any quantity exceeding:

- (a) Forty pounds of mussels;
- (b) One hundred oysters;
- (c) Fourteen horse clams;
- (d) Six geoducks; or
- (e) Fifty pounds of other hard or soft shell clams; or
- (f) Fifty pounds of scallops.

(7) "Cultch" means any material, other than live shellfish, used for the attachment of seed shellfish.

(8) "Department" means the state department of health.

(9) "Export certificate" means a certificate issued by the department to a licensed shucker-packer or shellstock shipper for use in the foreign export of a lot or shipment of shellfish.

(10) "Harvest" means the act of removing shellstock from a harvest site and its placement on or in a container for transport.

(11) "Harvester" means a shellfish operation with activities limited to growing shellstock, placing shellstock in a container, harvesting shellstock, transporting shellstock within Washington state, and delivering shellstock to a shellfish

dealer licensed by the department within four hours of landing it. A harvester does not process shellfish, ship shellfish outside of Washington state, sell shellfish outside of Washington state, sell shellfish to retail outlets, shuck shellfish, repack shellfish, or store shellfish in any location outside of the approved growing area from where the shellfish is harvested.

(12) "Harvest site" means an area of intertidal or subtidal property within a commercial shellfish growing area, that is described by a unique county parcel number, department of fish and wildlife tract number, department of fish and wildlife catch area number, tribal identification number, or other government identification.

(13) "Harvest site certificate" means a type of certificate of approval that designates one or more harvest sites approved for the harvesting of shellfish.

(14) "Hatchery" means an operation where shellfish larvae are produced and grown to the first sessile stage of life.

(15) "Notice of correction" means a document issued by the department that describes a condition or conduct that is not in compliance with chapter 69.30 RCW, this chapter, or the NSSP Model Ordinance and is not subject to civil penalties as provided for in RCW 43.05.110. It is not a formal enforcement action and is not subject to appeal. It is a public record.

(16) "Nursery" means an operation where shellfish are grown from an early sessile stage of life up to a maximum size meeting the definition of shellfish seed.

(17) "Number of previous violations" means the number of prior violations of the same or a similar nature for which the department has taken a license action or assessed a civil penalty.

(18) "Person" means any individual, firm, corporation, partnership, company, association, or joint stock association, and the legal successor thereof.

(19) "Person in charge" means an individual responsible for the supervision of employees and the management of any shellfish operation.

(20) "Public health threat" is either:

(a) "Low," which means a violation that poses a minor possibility of direct or indirect hazard to public health;

(b) "Intermediate," which means a violation that poses a moderate possibility of direct or indirect hazard to public health; or

(c) "High," which means a violation that poses a known significant hazard or possibility of significant direct or indirect hazard to public health.

(21) "Sale" means to sell; offer for sale; barter; trade; deliver; consign; hold for sale, consignment, barter, trade, or delivery; and/or possess with intent to sell or dispose of in a commercial manner.

(22) "Secretary" means the secretary of the department of health or the secretary's authorized representative.

(23) "Seed" means shellfish that are less than market size for human consumption and have a maximum shell length of:

(a) Thirteen millimeters (1/2 inch) for mussels;

(b) Twenty-five millimeters (1 inch) for scallops;

(c) Nineteen millimeters (3/4 inch) for Olympia oysters;

(d) Nineteen millimeters (3/4 inch) for Kumamoto oysters;

(e) Fifty-one millimeters (2 inches) for other oyster species;

(f) Thirty-eight millimeters (1 and 1/2 inch) for geoducks; and

(g) Thirteen millimeters (1/2 inch) for other clam species.

(24) "Shellfish" means all varieties of fresh or fresh-frozen oysters, clams, scallops or mussels, either shucked or in the shell, and all fresh or fresh-frozen edible products thereof.

(25) "Shellfish dealer" means a person with a shellstock shipper or shucker-packer license.

(26) "Shellfish growing area" means the lands and waters in and upon which shellfish are grown for harvesting in commercial quantities or for sale for human consumption.

(27) "Shellfish operation" means growing, placing in a container, harvesting, transporting, processing, culling, shucking, packing, and repacking, storing, shipping, or reshipping of shellfish in commercial quantities or for sale for human consumption.

(28) "Shellfish operation license" means a type of certificate of approval applying to the overall activities of a shellfish operation.

(29) "Shellstock shipper" means a shellfish operation that does not shuck shellfish or repack shucked shellfish.

(30) "Shucker-packer" means a shellfish operation that may shuck and pack shellfish.

(31) "Technical assistance" means information provided by the department to a person regarding chapter 69.30 RCW; this chapter; technologies or other methods to achieve compliance with these rules; assistance in applying for a departmental license or permit required by these rules; or the goals and objectives of these rules. This is not intended to modify the definition of "technical assistance" as provided in RCW 43.05.010(3).

(32) "Violation" means the commission of an act or acts prohibited by the provisions of chapter 69.30 RCW, these rules, or the NSSP Model Ordinance.

(33) "Wet storage" means the temporary storage of shellstock in containers or floats in natural bodies of water or in tanks containing natural or synthetic seawater.

(34) "Wild seed" means naturally set seed shellfish.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-010, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030. 92-02-019 (Order 225B), § 246-282-010, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030 and 43.20.050. 85-21-048 (Order 296), § 248-58-005, filed 10/14/85. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-005, filed 7/24/78.]

WAC 246-282-012 Certificates of approval—Operation licenses, harvest site certificates. (1) The department issues two types of certificates of approval to persons who conduct shellfish operations. They are shellfish operation licenses and harvest site certificates.

(2) Any person who possesses a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must possess, or act on behalf of a person who possesses, a valid shellfish operation license. To obtain a shellfish operation license, a person must:

(a) Submit to the department a completed application on a form developed by the department;

(b) Submit to the department an acceptable written plan of operations that completely describes the shellfish operation;

(c) Pass a preoperational inspection demonstrating compliance with chapter 69.30 RCW, this chapter, and the NSSP Model Ordinance; and

(d) Pay the department any shellfish operation license fee required by this chapter.

(3) Any person who harvests a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must possess, or act on behalf of a person who possesses, a valid harvest site certificate. In order for a person to obtain a harvest site certificate, all of the following requirements must be met.

(a) The person possesses a valid shellfish operation license.

(b) The person submits to the department a completed application that describes the following characteristics of the site:

(i) Geographic location;

(ii) Map showing legal boundaries;

(iii) Unique government identification number, such as county parcel number, department of fish and wildlife tract number, department of fish and wildlife catch area number, or tribal identification number; and

(iv) Documentation of legal ownership or lease for shellfish harvesting.

(c) The harvest site is in a growing area that meets the requirements of chapter 69.30 RCW, this chapter, and the NSSP Model Ordinance for a commercial shellfish growing area.

(d) The harvest site is not impacted by any actual or potential sources of pollution.

(e) The harvest site passes a pollution assessment inspection conducted by the department if necessary to determine if the site is impacted by any actual or potential sources of pollution.

(f) The person signs the current conditionally approved area management plan, if applicable.

(g) The person pays the department any harvest site application fee required by this chapter.

(4) All shellfish operation licenses and harvest site certificates for shellfish dealers expire on the thirtieth day of September each year. All shellfish operation licenses and harvest site certificates for harvesters expire on the thirty-first day of March each year, beginning in 2002.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-012, filed 2/5/01, effective 3/8/01.]

WAC 246-282-014 Operating provisions. (1) Any person who possesses a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must display a photocopy or original of a valid shellfish operation license, upon request, to any authorized representative of the department, a fish and wildlife patrol officer, or an ex officio patrol officer. Failure to do so subjects the person to the penalty provisions of this chapter, as well as immediate seizure of the shellfish by the representative or officer.

[Title 246 WAC—p. 538]

(2) Any person who harvests a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must display a photocopy or original of a valid harvest site certificate, upon request, to any authorized representative of the department, a fish and wildlife patrol officer, or an ex officio patrol officer. Failure to do so subjects the person to the penalty provisions of this chapter, as well as immediate seizure of the shellfish by the representative or officer.

(3) Any person who places a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption in containers at a harvest site must do so only at a site for which the person possesses a valid harvest site certificate.

(4) The owner(s) of a shellfish operation must designate an individual as the person in charge of the operation. The owner(s) of a shellfish operation that includes one or more harvest sites may designate a different individual as the person in charge of the operation's harvest site(s) than the individual designated as the person in charge of all other phases of the shellfish operation.

(5) The owner(s) and the designated person in charge of a shellfish operation must:

(a) Ensure that at least one individual harvesting shellfish on behalf of the operation at each harvest site carry a copy of both the operation license and the harvest site certificate designating that the site is approved by the department for harvesting by that operation;

(b) Furnish shellfish tags meeting the requirements of chapter 69.30 RCW, these rules, and the NSSP Model Ordinance to those individuals harvesting on behalf of the operation;

(c) Ensure, by supervision at harvest sites or other adequate means, that those individuals working on behalf of the operation harvest only from harvest sites approved by the department for the operation; and

(d) Notify the department if an owner or person in charge has reason to believe that any individual is using the operation's tags, shellfish operation license, or harvest site certificate for any purpose other than one approved by the department.

(6) The designated person in charge of a shellfish operation must have a functioning telephone message device or service issued by a telephone service provider to the owner(s) or person in charge. The person in charge must:

(a) Monitor the device or service each day that the shellfish operation is active, regarding messages from the department about emergency closure of harvest areas or recall of shellfish products; and

(b) Notify the department whenever the telephone number used for this purpose changes; or

(c) Maintain another equivalent method of contact with the department approved in the plan of operations.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-014, filed 2/5/01, effective 3/8/01.]

WAC 246-282-016 Aquaculture. Any person who conducts an aquaculture operation and is in possession of a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must meet all requirements of this chapter, except such person is exempt from all require-

(2003 Ed.)

ments of this chapter for the purpose of conducting aquaculture activities limited to the following:

- (1) A hatchery operation; or
- (2) A nursery operation handling only seed that is obtained from a hatchery.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-016, filed 2/5/01, effective 3/8/01.]

WAC 246-282-020 Growing areas. (1) Any person who harvests a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must do so only from a harvest site that meets one or more of the following conditions:

(a) The department has classified the growing area as "approved" or "conditionally approved," according to provisions of the NSSP Model Ordinance and the harvest site is in open status at the time of harvest;

(b) The department has approved the harvest site according to provisions of a permit for relay, wild seed, or bait;

(c) The harvest site is used for shellfish activities limited to a hatchery or a nursery operation handling only seed obtained from a hatchery; or

(d) The harvest site is used for shellfish activities limited to the initial harvest of seed attached to containerized empty shellfish shells or other cultch material.

(2) The department classifies a shellfish growing area as "restricted" or "prohibited" according to provisions of the NSSP Model Ordinance. However, the department considers classifying a harvest site as "restricted" only when the department has received a valid application for a permit for relay or wild seed harvest from the site.

(3) While a harvest site is in closed status, no person may move shellfish from it to a location outside of the harvest site or above the mean low tide line of the harvest site, unless the department has approved:

(a) Harvesting shellfish by that person from the site according to provisions of a permit for relay, wild seed harvest, or bait harvest; or

(b) Moving shellfish by that person from the site to another site in a natural body of water within the same "conditionally approved" growing area under a written plan of operations.

(4) Harvesting is prohibited from all growing areas unclassified by the department.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-020, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030 and 43.20.050. 85-21-048 (Order 296), § 248-58-010, filed 10/14/85. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-010, filed 7/24/78; Regulation 58.010, effective 3/11/60.]

WAC 246-282-032 Relay permit. (1) The department will issue a relay permit to a person to move shellfish from a harvest site in a growing area classified as "restricted" or "conditionally approved" in closed status meeting the criteria for "restricted" classification, if all of the following conditions are met.

(a) The person possesses a valid shellfish operation license.

(2003 Ed.)

(b) The person possesses a valid harvest site certificate listing both the initial harvest site and the grow-out site.

(c) The initial harvest site and grow-out site meet the requirements for relay specified in this chapter and the NSSP Model Ordinance.

(d) The person submits a completed written application and plan of operations approved by the department completely describing the procedures and conditions of the relay operation.

(e) The person conducts and documents a separate validation study approved by the department for each of the following periods of time when shellfish will be relayed:

(i) May 1 through October 31; and

(ii) November 1 through April 30.

(f) The person pays the department a relay permit application fee or renewal fee as required by this chapter.

(2) Each validation study for a relay permit must demonstrate that shellfish harvested from a specified initial site do not contain excessive levels of fecal coliform bacteria and when relayed to a specified grow-out site for a specified time period consistently purge themselves of bacteria to approved levels. Each validation study must meet all of the following conditions.

(a) It must document that the geometric mean fecal coliform bacteria level in a minimum of five 100-gram tissue samples, representative of shellfish of the same species in the entire initial harvest site, is equal to or less than 1300, with no sample having more than 2300.

(b) It must document that specified relay procedures, times, and environmental conditions reduce fecal coliform bacteria in a minimum of five 100-gram tissue samples, representative of the entire lot of shellfish relayed, to levels that are equal to or less than:

(i) 330, with no more than two samples having greater than 230; or

(ii) Ten percent greater than the geometric mean of a minimum of five 100-gram tissue samples representative of the same shellfish species grown continuously for a minimum of six months at the grow-out site.

(c) It must be repeated a minimum of once every twelve years for a continuing operation and whenever relay conditions change.

(d) All samples must be analyzed by an approved laboratory.

(3) A person operating under a relay permit must follow all procedures in the plan of operations approved by the department, including:

(a) Staking or marking the grow-out site to be easily identified by the person until the minimum relay period of time is passed;

(b) Considering the beginning of the minimum relay time period for a lot to be the moment that the last part of the lot is added to the grow-out site;

(c) Relaying shellfish to a designated grow-out site for a minimum of seven days, or longer period of time as approved by the department; and

(d) Keeping records for each relayed lot of shellfish that show a lot identification number; the species, location, date, and quantity moved from the initial harvest site; the grow-out

location; and the date of first harvest of any of those shellfish from the grow-out site.

(4) For each lot of shellfish relayed to a site for a grow-out period of less than fourteen days, a person must:

(i) Collect at least one sample from the shellfish lot at the initial harvest site and have it analyzed by an approved laboratory to demonstrate that the lot contains no more than 2300 fecal coliform bacteria per 100 grams of shellfish tissue; and

(ii) Collect at least one sample from the shellfish lot at the grow-out site at the end of the relay period and have it analyzed by an approved laboratory to demonstrate that the lot contains fecal coliform bacteria within the maximum limits determined by a validation study, as described in subsection (2)(b) of this section, before releasing control of the shellfish lot.

(5) A person is exempt from any fees for an initial application and a validation study conducted by the department for a relay permit for the purpose of relaying shellfish from a growing area that the department downgraded from a classification of "approved" or "conditionally approved" to "restricted" within the previous twenty-four months.

(6) A person's relay permit expires on the same date as the person's shellfish operation license.

(7) A person is exempt from the provisions of subsection (1) (e) of this section for the purpose of relaying shellfish to an approved grow-out site for a minimum of six months.

(8) A person possessing a valid shellfish operation license may act as an agent for another person possessing a valid shellfish relay permit for the purpose of harvesting shellfish from the initial harvest site specified in the permit, provided that the agent conducting the harvest is:

(a) Documented in the permit;

(b) In possession of a copy of the permit at the time of harvest; and

(c) Conducting activities described in the written plan of operations approved by the department for the agent's shellfish operation.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-032, filed 2/5/01, effective 3/8/01.]

WAC 246-282-034 Wild seed permit. (1) The department will issue a wild seed permit to a person to move shellfish from a harvest site in a growing area classified by the department as "conditionally approved" in closed status, "restricted," or "prohibited," if all of the following conditions are met.

(a) The person possesses a valid shellfish operation license.

(b) The person possesses a harvest site certificate listing both the initial harvest site for the seed and the grow-out site.

(c) The original harvest site has acceptable levels of poisonous chemicals, is not in an area known to be a hazardous chemical disposal site, and is not in a closure zone of a wastewater treatment plant or marina.

(d) The grow-out site is in a natural body of water classified by the department as "approved" or "conditionally approved."

(e) The person submits a completed written application and plan of operations approved by the department com-

pletely describing the procedures of the wild seed operation, including the size distribution of the seed.

(f) The person pays the department a wild seed permit application fee or renewal fee as required by this chapter.

(2) A person operating under a wild seed permit must:

(a) Follow all procedures in the plan of operations approved by the department;

(b) Harvest seed from an area classified as "prohibited" only during daylight hours;

(c) Harvest seed from an area classified as "prohibited" only under direct monitoring by a person approved by the department;

(d) Leave seed in a grow-out site for a minimum of six months before final harvest;

(e) Limit harvest of live shellfish larger than seed size attached to, or commingled with, the seed to less than five percent of the total number of the shellfish harvested from the site;

(f) Place any live shellfish larger than seed size attached to, or commingled with, the seed in the grow-out site for a minimum of six months after initial harvest;

(g) Stake or mark the grow-out site to be easily identified by the person for a minimum of six months from the time of moving to the site any seed attached to, or commingled with, shellfish larger than seed size; and

(h) Keep records for each lot of seed harvested that show a lot identification number; the species, location, date, and quantity moved from the initial harvest site; the grow-out location; and the date of first harvest of any of those shellfish from the grow-out site.

(3) A person's wild seed permit expires on the same date as the person's shellfish operation license.

(4) A person is exempt from the requirements of this section for the activity of harvesting seed attached to containerized empty shellfish shells or other cultch material, provided that the person:

(a) Meets the conditions of subsection (1)(a) through (d) of this section;

(b) Leaves the seed in the grow-out site for a minimum of six months before final harvest; and

(c) Fully describes the seed harvest and grow-out activities in a written plan of operations approved by the department for the person's shellfish operation license.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-034, filed 2/5/01, effective 3/8/01.]

WAC 246-282-036 Bait permit. (1) The department will approve and issue a bait permit to a person to harvest shellfish from a harvest site in a growing area classified by the department as "prohibited," "restricted," or "conditionally approved" in closed status if all of the following conditions are met.

(a) The person possesses a valid shellfish operation license.

(b) The person possesses a valid harvest site certificate for the site.

(c) The harvest site is not impacted by biotoxin levels that would cause the department to close it for harvest for human consumption.

(d) The person submits a completed written application and plan of operations approved by the department completely describing the procedures of the bait operation.

(e) The person pays the department a bait permit application fee or renewal fee as required by this chapter.

(2) A person operating under a bait permit must:

(a) Follow all procedures in the plan of operations approved by the department;

(b) Harvest bait from an area classified as "prohibited" only during daylight hours;

(c) Harvest bait from an area classified as "prohibited" only under direct monitoring by a person approved by the department;

(d) Completely immerse the shellfish in an approved dye that imparts an easily noticeable permanent color to the tissue immediately upon landing the shellfish;

(e) Label each container of shellfish "NOT FOR HUMAN CONSUMPTION - BAIT USE ONLY" prior to removal from the harvest site;

(f) Store the shellfish physically separated from any shellfish intended for human consumption; and

(g) Keep records for each lot of shellfish harvested for use as bait showing a lot identification number, the species, the harvest site, the harvest date, the quantity harvested, the names of all buyers, and the quantity sold to each buyer.

(3) A person's bait permit expires on the same date as the person's shellfish operation license.

(4) Any person possessing a commercial quantity of bait shellfish is exempt from the requirement to obtain a bait permit provided that the person:

(a) Obtains the shellfish from a person with a valid bait permit;

(b) Possesses a sales invoice for the shellfish from a person with a valid bait permit; and

(c) Maintains each container of shellfish prominently labeled "NOT FOR HUMAN CONSUMPTION - BAIT USE ONLY."

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-036, filed 2/5/01, effective 3/8/01.]

WAC 246-282-042 Wet storage permit. (1) Any person who wet stores a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must have a written plan of operations, approved by the department, completely describing the activity.

(2) A person licensed as a harvester may wet store only in a natural body of water that is part of the same growing area as the harvest site of the shellfish.

(3) Any person who operates a recirculating or flow-through wet storage system must possess a wet storage permit issued by the department. A wet storage permit will be issued to a person for a recirculating or flow-through wet storage system if the person:

(a) Possesses a valid shellfish operation license;

(b) Submits a completed written application and plan of operations to the department completely describing the procedures of the wet storage operation;

(c) Documents that the water used for the operation meets the requirements of the NSSP Model Ordinance;

(d) Passes an inspection by the department; and

(2003 Ed.)

(e) Pays the department a wet storage application fee or renewal fee as required by this chapter.

(4) If a person uses a natural body of water for a wet storage operation, the person must possess a valid harvest site certificate listing the body of water.

(5) If a person uses artificial seawater for a wet storage operation, the chemicals used to make the seawater must be approved food grade.

(6) A person operating under a wet storage permit must follow all procedures in the plan of operations approved by the department.

(7) A person's wet storage permit expires on the same date as the person's shellfish operation license.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-042, filed 2/5/01, effective 3/8/01.]

WAC 246-282-050 Packing, handling, and storing of shucked shellfish. (1) Any person who packs, handles, or stores shucked shellfish must maintain it at an internal product temperature of forty-five degrees Fahrenheit or less beginning within three hours after it is shucked.

(2) Any person who operates a shucked shellfish repacking plant must meet all the requirements specified in this chapter and the NSSP Model Ordinance for packing plants.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-050, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-040, filed 7/24/78; Regulation 58.040, effective 3/11/60.]

WAC 246-282-060 Personal health and cleanliness.

(1) Any person ill with or the carrier of a communicable disease which is transmissible through food and is in the infectious stage may not work in any growing area, shucking, packing or repacking plant in any capacity where that person might contaminate the shellfish or food contact surfaces with pathogenic organisms. The owner, the person in charge, and the employee are all responsible for compliance with the requirements of this section.

(2) Any person who is an owner, a person in charge, or an employee of a shellfish operation must practice good personal cleanliness while handling shellfish. These persons must wash their hands thoroughly with soap and water before starting to handle shellfish and as often as is necessary to remove filth and soil that might contaminate shellfish.

(3) If the department determines by investigation that an owner or employee of a shellfish operation might be the source of a foodborne illness transmitted through shellfish, then the secretary may require medical examination of that person and laboratory examination of clinical specimens from that person to determine presence of infection. Any person failing to obtain an examination required by the secretary may not work for a shellfish operation, for a period of time the department determines that person could be infectious, in any capacity that could result in contamination of shellfish with pathogenic organisms.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-060, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030. 78-08-

059 (Order 163), § 248-58-050, filed 7/24/78; Regulation 58.050, effective 3/11/60.]

WAC 246-282-070 Construction and maintenance.

(1) All owners and persons in charge of shellfish operations must arrange their physical facilities to aid in the flow of shellfish products through all handling, processing, and storage areas in a manner that will minimize contamination of the shellfish.

(2) Any owner of a shellfish operation must submit to the department for consultation properly prepared plans and specifications of physical facilities for shellfish processing or sanitation activities at least thirty days before the facilities are:

- (a) Originally constructed;
- (b) Converted from another use; or
- (c) Extensively remodeled to the extent that a plan for a building permit is required by the city or county where located.

(3) The department will review properly prepared plans and specifications of physical facilities for shellfish processing or sanitation activities required by subsection (2) of this section within thirty days of receipt and provide technical assistance to the owner of the shellfish operation regarding whether the proposed physical facilities would meet the requirements of this chapter.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-070, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-060, filed 7/24/78; Regulation 58.060, effective 3/11/60.]

WAC 246-282-080 Identification and records. (1)

Any person who possesses a commercial quantity of shellfish or any quantity of shellfish for sale for human consumption must possess a written record documenting that the shellfish came from one or more of the following sources:

- (a) Harvest site(s) for which the person possesses a valid harvest site certificate;
- (b) Another shellfish operation licensed by the department; or
- (c) A shellfish dealer located outside of the state who is in compliance with the requirements of the NSSP Model Ordinance and is eligible for inclusion on the current Interstate Certified Shellfish Shippers List, published by the U.S. Food and Drug Administration.

(2) Any person who possesses a commercial quantity of shellstock or any quantity of shellstock for sale for human consumption must identify the shellstock by an approved tag with permanent marking, according to requirements of the NSSP Model Ordinance, upon removal from the harvest site.

(3) Any person who packs a commercial quantity of shucked shellfish or any quantity of shucked shellfish for sale for human consumption must do so in approved containers that are legibly labeled by permanent marking, in accordance with the requirements of the NSSP Model Ordinance and with:

- (a) Wording equivalent to "keep refrigerated" on containers of fresh shellfish; and

(b) Wording equivalent to "keep frozen" on containers of frozen shellfish.

(4) The owner or person in charge of a shellfish operation must keep accurate records of all lots of shellfish harvested, received, wet stored, shucked, packed, shipped, or sold by the shellfish operation for a minimum of three years.

(5) Information recorded by the harvester-shipper shall include: (a) Location of harvesting area(s) by name or code, (b) name and quantity of shellfish, (c) date of harvest, (d) date shipped.

(6) All tags for shellstock and labels for containers of shucked shellfish required by this section must be used only for the original lot of shellfish for which they were intended and must not be reused.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-080, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030. 92-02-019 (Order 225B), § 246-282-080, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-070, filed 7/24/78; Regulation 58.070, effective 3/11/60.]

WAC 246-282-082 Export certificate. The department will issue an export certificate to a shellfish dealer for a specific lot of shellfish if the dealer:

- (1) Is exporting the lot to an Asian country that requires a production certificate from a governmental health authority;
- (2) Possesses a shellfish operation license issued by the secretary;
- (3) Is in compliance with the requirements of chapter 69.30 RCW, this chapter, and the NSSP Model Ordinance;
- (4) Completes an application specified by the department;
- (5) Documents use of each export certificate as specified by the department; and
- (6) Pays the department any fee for each export certificate required by this chapter.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-082, filed 2/5/01, effective 3/8/01.]

WAC 246-282-092 Inspection by department. (1) The department enters and inspects any harvest site, physical facility, vehicle or vessel used by a shellfish operation as often as necessary to determine compliance with chapter 69.30 RCW, this chapter, and the NSSP Model Ordinance.

- (2) The department inspects each shellfish operation:
 - (a) A minimum of once per year;
 - (b) Before issuing a new shellfish operation license to a person;
 - (c) Before a shellfish operation uses any physical facility for the first time; and
 - (d) Before the shellfish operation uses any extensively remodeled physical facility.

(3) If the department determines by inspection that an owner, person in charge, or any person working on behalf of the shellfish operation is in violation of any of the requirements of chapter 69.30 RCW, this chapter, or the NSSP Model Ordinance, then the department may conduct a reinspection of the shellfish operation. If the same violation is identified by the department during the reinspection, then

another reinspection may be conducted by the department within one month. The department may charge the owner of a shellfish operation a fee for a second or subsequent reinspection.

(4) If necessary to conduct an inspection, then the department may apply to a court of competent jurisdiction for an administrative warrant in accordance with RCW 69.30.120.

(5) During inspections, the department has free and unimpeded access to any of the following in order to determine whether the operation is in compliance with chapter 69.30 RCW, this chapter, and the NSSP Model Ordinance:

(a) Buildings, yards, warehouses, storage facilities, transportation facilities, vehicles, vessels and other places reasonably considered to be or to have been used in connection with the shellfish operation;

(b) Ledgers, books, accounts, memorandums, or records reasonably believed to be or to have been used in connection with the shellfish operation;

(c) Shellfish, shellfish products, components, or other materials reasonably believed to be or to have been used, processed or produced by or in connection with the shellfish operation;

(d) Copies of any documents reasonably believed to be or to have been used in connection with the shellfish operation; and

(e) Samples of shellfish to determine whether they are safe for human consumption.

(6) The department may inspect shellfish growing areas at any time of day and will inspect any other aspect of a shellfish operation:

(a) Between 8:00 a.m. and 5:00 p.m. on any weekday that is not a legal holiday;

(b) During any time the shellfish operation has established as its business hours;

(c) During any time the shellfish operation is open for business or is otherwise in operation; and

(d) During any other time with the consent of the owner or the person in charge of the shellfish operation.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-092, filed 2/5/01, effective 3/8/01.]

WAC 246-282-100 Notice of decision—Adjudicative proceeding. (1) The department's notice of a denial, suspension, modification, or revocation of a license is consistent with RCW 43.70.115. An applicant or license holder has the right to an adjudicative proceeding to contest the decision.

(2) The department's notice of imposition of a civil penalty is consistent with RCW 43.70.095. A person upon whom the department imposes a civil fine has the right to an adjudicative proceeding to contest the decision.

(3) A license applicant or holder or a person upon whom the department imposes a civil penalty, may contest a department decision, within twenty-eight days of receipt of the decision by filing a written application for an adjudicative proceeding by a method showing proof of receipt with the administrative hearings unit, department of health. The person must include the following in or with the application:

(a) A specific statement of the issue or issues and law involved;

(2003 Ed.)

(b) The grounds for contesting the department decision; and

(c) A copy of the contested department decision.

(4) An adjudicative proceeding is governed by the Administrative Procedure Act (chapter 34.05 RCW), this chapter, and chapter 246-08 WAC. If a provision in this chapter conflicts with chapter 246-08 WAC, the provision in this chapter governs.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-100, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 69.30.030. 92-02-019 (Order 225B), § 246-282-100, filed 12/23/91, effective 1/23/92. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-100, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW and RCW 69.30.030. 90-06-049 (Order 040), § 248-58-085, filed 3/2/90, effective 3/2/90.]

WAC 246-282-102 Denial, revocation, suspension of license, certificate, or permit—Civil penalties. (1) The department may deny, revoke, or suspend a shellfish operation license, harvest site certificate, or permit and may assess a civil penalty if a person:

(a) Fails to comply with any of the provisions of chapter 69.30 RCW, these rules, and the NSSP Model Ordinance;

(b) Refuses an inspection by the department;

(c) Harvests shellfish from any harvest site for which the secretary has not issued a harvest site certificate to the person;

(d) Knowingly obtains shellfish from a person who is not in compliance with any requirements of chapter 69.30 RCW, this chapter, or the NSSP Model Ordinance;

(e) Makes false statements or misrepresentations to the department during any investigation, inspection, or application for a shellfish operation license or any permit required by these rules;

(f) Makes false statements or misrepresentations to the department during any investigation, inspection, or application for a shellfish harvest site certificate;

(g) Fails to cooperate with the department or the department of fish and wildlife during an investigation;

(h) Aids another person in violating any requirement of chapter 69.30 RCW, these rules, or the NSSP Model Ordinance;

(i) Provides the department with false or fraudulent records of the shellfish operation;

(j) Transfers or reassigns a shellfish operation license to another person without the written approval of the department; or

(k) Fails to comply with the terms of a conditional area management plan, shellfish operation license, harvest site certificate, or any permit required by this chapter.

(2) Violations of chapter 69.30 RCW, these rules, or the NSSP Model Ordinance committed by a person in charge, employee, or agent of a person issued a shellfish operation license may be treated by the department as a violation committed by the licensee.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-102, filed 2/5/01, effective 3/8/01.]

WAC 246-282-104 Penalty assignment—Calculation of penalty and proportionate adjustment—Aggravating

[Title 246 WAC—p. 543]

and mitigating factors. (1) The department calculates an appropriate penalty based on the following factors:

- (a) The level of threat to public health;
- (b) The number of previous violations attributed to the violator; and
- (c) The presence of aggravating or mitigating factors.

(2) The department determines administrative penalties from the range in the following penalty schedule. The standard penalty is assessed unless a proportionate adjustment is warranted and/or there are aggravating or mitigating factors present.

Penalty Schedule

NUMBER OF PREVIOUS VIOLATIONS	ADJUSTMENT FACTORS	PUBLIC HEALTH THREAT		
		LOW License Action/ Civil Penalty	INTERMEDIATE License Action/ Civil Penalty	HIGH License Action/ Civil Penalty
0	Mitigated	0 Months/\$150	0 Months/\$300	3 Months/\$350
	Standard	0 Months/\$200	1 Month/\$350	6 Months/\$400
	Aggravated	1 Month/\$250	3 Months/\$400	9 Months/\$450
1	Mitigated	0 Months/\$200	1 Month/\$350	6 Months/\$400
	Standard	0 Months/\$250	3 Months/\$400	9 Months/\$450
	Aggravated	3 Months/\$300	6 Months/\$450	12 Months/\$500
2	Mitigated	0 Months/\$250	3 Months/\$400	12 Months/\$500
	Standard	3 Months/\$300	6 Months/\$450	18 Months/\$500
	Aggravated	6 Months/\$350	9 Months/\$500	24 Months/\$500
3 or More	Mitigated	3 Months/\$300	6 Months/\$450	18 Months/\$500
	Standard	6 Months/\$350	9 Months/\$500	24 Months/\$500
	Aggravated	9 Months/\$400	12 Months/\$500	36 Months/\$500

(3) The department reserves the right to proportionately increase the civil penalty and decrease the license action under certain circumstances. These circumstances include situations where license actions as a deterrent are ineffective and include, but are not limited to, violations by persons who are not licensed.

(4) The department reserves the right to proportionately decrease the civil penalty and increase the license action when circumstances in a particular case demonstrate the ineffectiveness of a civil penalty as a deterrent.

(5)(a) When assessing a civil penalty or license action, the department considers any previous violation(s) for the following period of time, depending on the severity of the previous violation(s):

- (i) Three years for low public health threat;
- (ii) Five years for intermediate public health threat; or
- (iii) No limit for high public health threat.

(b) The time period will begin on the date of adjudication or settlement of the previous violation(s), rather than the date on which the incident or conduct occurred.

(6) The department considers circumstances that increase the seriousness of a violation, including, but not limited to, the following aggravating factors:

- (a) The extent to which the violation is part of a pattern of the same or substantially similar conduct;
- (b) The extent to which previous education, technical assistance, or notice of correction has been provided for the same or substantially similar conduct; and
- (c) The extent to which the violation caused serious and actual injury or death to a person or persons.

(7) If the department determines that one or more aggravating factors are present, then the department may assess the aggravated penalty or may increase the penalty to a level greater than listed in the penalty schedule, including, but not limited to, revocation of the license.

(8) The department will consider circumstances that decrease the seriousness of a violation, including, but not limited to, the following mitigating factors:

- (a) Voluntary disclosure of the violation;
- (b) Complete cooperation and voluntary disclosure during the investigation of the violation; and
- (c) Voluntary taking of remedial measures that will result in increased public health protection and that will result in a decreased likelihood that the violation will be repeated and that other violations will occur.

(9) If the department determines that one or more mitigating factors are present, then the department may assess the mitigated penalty or may decrease the penalty to a level less than listed in the penalty schedule.

(10) The maximum civil penalty that may be imposed by the department is five hundred dollars per day for each violation.

(11) The department considers each violation to be a separate and distinct event. Each day a violation is continued is a separate and distinct violation. When a person has committed multiple violations, the violations are cumulative for purposes of calculating the appropriate penalty. Penalties are added together, rather than served concurrently.

(12) Nothing in this section prevents the department from responding to a violation by:

- (a) Declining to pursue an administrative penalty;
- (b) Issuing a notice of correction instead of pursuing an administrative penalty; or
- (c) Negotiating settlement of a case on such terms and for such reason as the department deems appropriate. Violations covered by a prior settlement agreement may be used for the purpose of determining the appropriate penalty for the current alleged violation(s), unless prohibited by the prior settlement agreement.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-104, filed 2/5/01, effective 3/8/01.]

WAC 246-282-110 Administrative provisions. (1) If the department finds during an inspection that any owner or person working on behalf of a shellfish operation fails to comply with any requirements of chapter 69.30 RCW, this chapter, or the NSSP Model Ordinance, then the department may issue a written statement of deficiencies or notice of correction to the owner, person in charge, or other employee of the operation who is present.

(a) The statement of deficiencies or notice of correction specifies the manner in which the operation fails to comply with chapter 69.30 RCW and these rules. It specifies a reasonable period of time for the owner or person in charge to correct the violation(s).

(b) In the event the owner or person in charge fails to correct the violation(s) specified in the statement of deficiencies, the department may revoke the license and certificate of compliance for that shellfish operation or may initiate any other enforcement proceeding authorized by law.

(2) Any authorized representative of the department, fish and wildlife patrol officer or ex officio patrol officer may, without previously providing a statement of deficiencies, immediately seize shellfish or issue written hold orders prohibiting the disposition or sale of shellfish whenever a commercial quantity of shellfish or any amount of shellfish for sale for human consumption is on the premises of, or in the possession of, any person who:

(a) Fails to display an original or photocopy of a valid shellfish operation license;

(b) Is reasonably expected to have harvested the shellfish and fails to display an original or photocopy of a valid shellfish operation license and a valid harvest site certificate; or

(c) Fails to maintain each container of shellfish properly tagged or labeled as required by chapter 69.30 RCW, these rules, and the NSSP Model Ordinance.

(3) If the department determines during an inspection or investigation that there is reasonable cause to believe that shellfish is potentially unsafe for human consumption, then the department may issue a hold order prohibiting the disposition or sale of the shellfish pending further investigation by the department of the safety of the shellfish.

(a) The department must complete its further investigation within ten days.

(b) At the conclusion of the investigation, the department may release the shellfish for sale or issue a written abatement order regarding the shellfish.

(c) Any person in possession of shellfish for which the department has issued a hold order must store the shellfish in a suitable place prescribed by the department and prevent the shellfish from being offered for human consumption or other use until:

(i) The hold order is lifted by the department or by a court of competent jurisdiction; or

(ii) The person disposes of the shellfish in accordance with an abatement order issued by the department.

(4) Shellfish that the department seizes or places under a hold order and determines are unsafe for human consumption are subject to such abatement as the department considers appropriate. The department may require any one or more of the following measures be taken by a person in possession of shellfish that are the subject of an abatement order:

(a) Permanent prohibition on the disposition of the shellfish for human consumption;

(b) Immediate destruction of the shellfish by measures such as denaturing and placing in a sanitary landfill, witnessed by an authorized representative of the department who provides a record of destruction to the person; or

(c) Temporary prohibition on the disposition of the shellfish for human consumption pending relay to an approved growing area for a sufficient period of time to assure natural purification of the shellfish.

(5) The secretary may issue an abatement order to the owner or person in charge of a shellfish operation whenever the department, after conducting an appropriate investigation, determines that a shellfish operation, or person working on behalf of a shellfish operation, presents a potential risk for transmitting an infectious disease to consumers of shellfish.

(a) The secretary may require any or all of the following measures be taken by the owner or person in charge of a shellfish operation who is issued the abatement order:

(i) Immediate closure of the shellfish operation until, in the opinion of the secretary, no further danger of a disease outbreak exists;

(ii) Immediate exclusion of any person suspected to be infected with a disease agent transmissible through food from all activities with the shellfish operation; and

(iii) Restriction of the activities of any person who is suspected to be infected with a disease agent transmissible through food to some area of the shellfish operation where there would be no danger of the person transmitting disease agents to shellfish consumers.

(b) As an alternative to the abatement order described in this section, the secretary may require the owner, or any person working on behalf of the shellfish operation to submit to adequate medical and laboratory examinations, including examination of their bodily discharges as needed to determine if the person is infected with a microbial agent transmissible through food.

(6) No person may remove or alter a notice or tag constituting a hold order or abatement order placed on shellfish by the department.

(7) No person may relabel, repack, reprocess, alter, dispose of, destroy, or release shellfish or containers of shellfish for which the department has issued a hold order or abatement order without:

(a) Permission of the department; or

(b) An order by a court of competent jurisdiction.

(8) If the owner or person in charge of a shellfish operation fails to comply with a hold order or an abatement order issued according to this section, then the department may revoke the license of the shellfish operation or initiate other legal enforcement proceedings authorized by law.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-110, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030 and 43.20.050. 85-21-048 (Order 296), § 248-58-090, filed 10/14/85. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-090, filed 7/24/78; Regulation 58.090, effective 3/11/60.]

WAC 246-282-120 Penalty clause. Any person found violating any of the provisions of these regulations or chapter

69.30 RCW is guilty of a gross misdemeanor, and upon conviction will be subject to:

- (1) A fine; or
- (2) Imprisonment in the county jail of the county in which the offense was committed; or
- (3) Both fine and imprisonment.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-120, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030 and 43.20.050. 85-21-048 (Order 296), § 248-58-500, filed 10/14/85. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-500, filed 7/24/78.]

WAC 246-282-130 Separability clause. Should any section, paragraph, clause or phrase of these rules and regulations be declared unconstitutional or invalid for any reason, the remainder of these rules and regulations are not affected.

[Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-130, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-282-130, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 69.30.030. 78-08-059 (Order 163), § 248-58-900, filed 7/24/78.]

WAC 246-282-990 Fees. (1) Annual shellfish operation license fees are:

Type of Operation	Annual Fee
Harvester	\$250.
Shellstock Shipper	
0 - 49 Acres	\$282.
50 or greater Acres	\$452.
Scallop Shellstock Shipper	\$282
Shucker-Packer	
Plants with floor space < 2000 sq. ft.	\$514.
Plants with floor space 2000 sq. ft. to 5000 sq. ft.	\$622.
Plants with floor space > 5000 sq. ft.	\$1,147.

(2) The fee for each export certificate is \$10.

(3) Annual PSP testing fees for companies harvesting intertidally (between the extremes of high and low tide):

Fee Category	Number of Harvest Sites	Fee
Harvester	≤ 2	\$173
Harvester	3 or more	\$259
Shellstock Shipper	≤ 2	\$195
0 - 49 acres		
Shellstock Shipper	3 or more	\$292
0 - 49 acres		
Shellstock Shipper	N/A	\$468
50 or greater acres		
Shucker-Packer	≤ 2	\$354
(plants < 2000 ft ²)		
Shucker-Packer	3 or more	\$533
(plants < 2000 ft ²)		
Shucker-Packer	≤ 2	\$429
(plants 2000-5000 ft ²)		

Fee Category	Number of Harvest Sites	Fee
Shucker-Packer (plants 2000-5000 ft ²)	3 or more	\$644
Shucker-Packer (plants > 5000 ft ²)	N/A	\$1,189

(a) The number of harvest sites will be the total number of harvest sites on the licensed company's harvest site certificate:

- (i) At the time of first licensure; or
- (ii) January 1 of each year for companies licensed as harvesters; or
- (iii) July 1 of each year for companies licensed as shellstock shippers and shucker packers.

(b) Two or more contiguous parcels with a total acreage of one acre or less is considered one harvest site.

(4) Annual PSP testing fees for companies harvesting subtidal geoduck (below extreme low tide):

Harvester	Fee
Department of natural resources (leased tracts harvested by nontribal licensees)	\$17,178
Jamestown S'Klallam Tribe	\$3,135
Lower Elwah Klallam Tribe	\$3,423
Nisqually Indian Tribe	\$4,316
Port Gamble S'Klallam Tribe	\$5,312
Puyallup Tribe of Indians	\$3,862
Skagit System Cooperative	\$555
Skokomish Indian Tribe	\$2,490
Squaxin Island Tribe	\$5,153
Suquamish Tribe	\$11,595
Tulalip Tribe	\$981

(5) PSP fees must be paid in full to department of health before a commercial shellfish license is issued or renewed.

(6) Refunds for PSP fees will be given only if the applicant withdraws a new or renewal license application prior to the effective date of the new or renewed license.

[Statutory Authority: RCW 43.70.250 and the 2002 supplemental operating budget. 02-15-094, § 246-282-990, filed 7/16/02, effective 8/16/02. Statutory Authority: RCW 43.70.250, 70.90.150, and 43.20B.250. 01-14-047, § 246-282-990, filed 6/29/01, effective 7/30/01. Statutory Authority: RCW 69.30.030 and 43.20.030. 01-04-054, § 246-282-990, filed 2/5/01, effective 3/8/01. Statutory Authority: RCW 43.70.250. 00-02-016, § 246-282-990, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-282-990, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.20B.020 and 69.30.030. 98-12-068, § 246-282-990, filed 6/1/98, effective 7/2/98. Statutory Authority: RCW 43.203.020 [43.20B.020]. 97-12-031, § 246-282-990, filed 5/30/97, effective 6/30/97. Statutory Authority: RCW 43.20B.020 and 69.30.030. 96-16-073, § 246-282-990, filed 8/6/96, effective 10/1/96. Statutory Authority: RCW 43.70.040. 93-17-096 (Order 389), § 246-282-990, filed 8/17/93, effective 9/17/93; 91-02-049 (Order 121), recodified as § 246-282-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20A.055. 85-12-029 (Order 2236), § 440-44-065, filed 5/31/85; 84-13-006 (Order 2109), § 440-44-065, filed 6/7/84; 83-15-021 (Order 1991), § 440-44-065, filed 7/14/83. Statutory Authority: 1982 c 201. 82-13-011 (Order 1825), § 440-44-065, filed 6/4/82.]

Chapter 246-290 WAC
PUBLIC WATER SUPPLIES

WAC

PART 1.
GENERAL PROVISIONS

246-290-001	Purpose and scope.
246-290-002	Guidance.
246-290-010	Definitions.
246-290-020	Applicability.
246-290-025	Adoption by reference.
246-290-030	General administration.
246-290-035	Water system ownership.
246-290-040	Engineering requirements.
246-290-050	Enforcement.
246-290-060	Variances, exemptions, and waivers.

PART 2.
PLANNING AND ENGINEERING DOCUMENTS

246-290-100	Water system plan.
246-290-105	Small water system management program.
246-290-110	Project report.
246-290-120	Construction documents.
246-290-125	Project report and construction document submittal exceptions.
246-290-130	Source approval.
246-290-132	Interties.
246-290-135	Source water protection.
246-290-140	Existing system as-built approval.

PART 3.
DESIGN OF PUBLIC WATER SYSTEMS

246-290-200	Design standards.
246-290-220	Drinking water materials and additives.
246-290-221	Water demand design criteria.
246-290-222	Water system physical capacity.
246-290-230	Distribution systems.
246-290-235	Distribution reservoirs.
246-290-250	Treatment design.

PART 4.
WATER QUALITY

246-290-300	Monitoring requirements.
246-290-310	Maximum contaminant levels (MCLs).
246-290-320	Follow-up action.

PART 5.
WATER SYSTEM OPERATIONS

246-290-415	Operations and maintenance.
246-290-416	Sanitary surveys.
246-290-420	Reliability and emergency response.
246-290-451	Disinfection of drinking water.
246-290-455	Operation of chemical contaminant treatment facilities.
246-290-460	Fluoridation of drinking water.
246-290-470	Uncovered distribution reservoirs.
246-290-480	Recordkeeping and reporting.
246-290-490	Cross-connection control.
246-290-495	Public notification.
246-290-500	Severability.

PART 6.
SURFACE WATER TREATMENT

Subpart A - Introduction and General Requirements

246-290-601	Purpose of surface water treatment.
246-290-620	Applicability of surface water treatment requirements.
246-290-630	General requirements.
246-290-632	Treatment technique violations.
246-290-634	Follow-up to treatment technique violations.
246-290-636	Determination of disinfectant contact time (T).
246-290-638	Analytical requirements.
246-290-639	SWTR records.
246-290-640	Determination of GWI sources.

Subpart B - Requirements for Filtered Systems

246-290-650	Compliance requirements for filtered systems.
246-290-652	Filtration technology and design criteria for existing filtered systems.
246-290-654	Treatment criteria for filtered systems.
246-290-660	Filtration.
246-290-662	Disinfection for filtered systems.

246-290-664	Monitoring for filtered systems.
246-290-666	Reporting for filtered systems.
246-290-668	Watershed control.

Subpart C - Requirements for Systems Installing Filtration Facilities

246-290-670	Compliance requirements for existing unfiltered systems installing filtration.
246-290-672	Interim treatment requirements.
246-290-674	Interim monitoring and reporting.
246-290-676	Filtration technology and design criteria.
246-290-678	Reliability for filtered systems.

Subpart D - Requirements for Other Unfiltered Systems

246-290-686	Compliance requirements for unfiltered systems.
246-290-690	Criteria to remain unfiltered.
246-290-691	Criteria for unfiltered systems with a "limited alternative to filtration" to remain unfiltered.
246-290-692	Disinfection for unfiltered systems.
246-290-694	Monitoring for unfiltered systems.
246-290-696	Reporting for unfiltered systems.

PART 7.
REPORTING

Subpart B - Consumer Confidence Reports

246-290-72001	Purpose and applicability of the consumer confidence report requirements.
246-290-72002	Reporting dates.
246-290-72003	Report contents—Source water.
246-290-72004	Report contents—Definitions.
246-290-72005	Report contents—Information on detected contaminants.
246-290-72006	Report contents—Information on Cryptosporidium, radon, and other contaminants.
246-290-72007	Report contents—Compliance with National Primary Drinking Water Regulations.
246-290-72008	Report contents—Variances and exemptions.
246-290-72009	Report contents—Additional information.
246-290-72010	Report contents—Required additional health information.
246-290-72011	Report delivery and recordkeeping.
246-290-72012	Regulated contaminants.

FEEES

246-290-990	Water system evaluation and project review and approval fees.
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**DISPOSITION OF SECTIONS FORMERLY
 CODIFIED IN THIS CHAPTER**

246-290-115	Corrosion control recommendation report. [Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-115, filed 6/22/94, effective 7/23/94.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
246-290-210	Source protection. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-210, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-125, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-125, filed 9/8/83.] Repealed by 93-08-011 (Order 352B), filed 3/25/93, effective 4/25/93. Statutory Authority: RCW 43.20.050.
246-290-240	Disinfection of facilities. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-240, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-145, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-145, filed 9/8/83.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
246-290-330	Public notification. [Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-330, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-330, filed 3/25/93, effective 4/25/93; 92-04-070 (Order 241B), § 246-290-330, filed 2/4/92, effective 3/6/92. Statutory Authority: Chapter 43.20 RCW. 91-07-031 (Order 150B), § 246-290-330, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-330, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-187, filed

- 10/10/89, effective 11/10/89.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
- 246-290-400 Operator certification. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-400, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-194, filed 2/17/88.] Repealed by 93-08-011 (Order 352B), filed 3/25/93, effective 4/25/93. Statutory Authority: RCW 43.20.050.
- 246-290-410 Small water system management program. [Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-410, filed 6/22/94, effective 7/23/94; 91-02-051 (Order 124B), recodified as § 246-290-410, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-196, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-196, filed 2/17/88.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
- 246-290-430 Continuity of service. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-430, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-205, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-205, filed 9/8/83.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
- 246-290-440 Operations. [Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-440, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-440, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-440, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-215, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-215, filed 9/8/83.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
- 246-290-450 Watershed control. [Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-450, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-225, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-225, filed 9/8/83.] Repealed by 93-08-011 (Order 352B), filed 3/25/93, effective 4/25/93. Statutory Authority: RCW 43.20.050.
- 246-290-610 Definitions relating to surface water treatment. [Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-610, filed 3/25/93, effective 4/25/93.] Repealed by 99-07-021, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.02.050.
- 246-290-680 Operating criteria for new water treatment facilities. [Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-680, filed 3/25/93, effective 4/25/93.] Repealed by 97-20-100, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.20.050.

PART 1. GENERAL PROVISIONS

WAC 246-290-001 Purpose and scope. (1) The purpose of this chapter is to define basic regulatory requirements and to protect the health of consumers using public drinking water supplies.

(2) The rules of this chapter are specifically designed to ensure:

(a) Adequate design, construction, sampling, management, maintenance, and operation practices; and

(b) Provision of safe and high quality drinking water in a reliable manner and in a quantity suitable for intended use.

(3) Purveyors shall be responsible for complying with the regulatory requirements of this chapter.

(4) These rules are intended to conform with Public Law 93-523, the Federal Safe Drinking Water Act of 1974, and

[Title 246 WAC—p. 548]

Public Law 99-339, the Safe Drinking Water Act Amendments of 1986, and certain provisions of Public Law 104-182, the Safe Drinking Water Act Amendments of 1996.

(5) The rules set forth are adopted under chapter 43.20 RCW. Other statutes relating to this chapter are:

(a) RCW 43.20B.020, Fees for services—Department of health and department of social and health services;

(b) Chapter 43.70 RCW, Department of health;

(c) Chapter 70.05 RCW, Local health department, boards, officers—Regulations;

(d) Chapter 70.116 RCW, Public Water System Coordination Act of 1977;

(e) Chapter 70.119 RCW, Public water supply systems—Certification and regulation of operators;

(f) Chapter 70.119A RCW, Public water systems—Penalties and compliance; and

(g) Chapter 70.142 RCW, Chemical contaminants and water quality.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-001, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-001, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-001, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-005, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-005, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-005, filed 9/8/83.]

WAC 246-290-002 Guidance. (1) The department has numerous guidance documents available to help purveyors comply with state and federal rules regarding drinking water. These include documents on the following subjects:

(a) Compliance;

(b) System management and financial assistance;

(c) Groundwater protection;

(d) Growth management;

(e) Operations/maintenance;

(f) Operator certification;

(g) Water system planning;

(h) Monitoring and water quality;

(i) System approval;

(j) Small water systems;

(k) Water resources;

(l) Water system design; and

(m) General information.

(2) The guidance documents are available at minimal or no cost by contacting the division of drinking water's publication service at (360) 236-3099 or (800) 521-0323. Individuals can also request the documents via the Internet at <http://www.doh.wa.gov/ehp/dw> or through conventional mail at P.O. Box 47822, Olympia, Washington 98504-7822.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-002, filed 3/9/99, effective 4/9/99.]

WAC 246-290-010 Definitions. Abbreviations and acronyms:

ADD - average day demand;

AG - air gap;

ANSI - American National Standards Institute;

APWA - American Public Works Association;

ASCE - American Society of Civil Engineers;

AVB - atmospheric vacuum breaker;
AWWA - American Water Works Association;
BAT - best available technology;
BAT - backflow assembly tester (for WAC 246-29-490);
C - residual disinfectant concentration in mg/L;
CCS - cross-connection control specialist;
CFR - code of federal regulations;
CT - the mathematical product in mg/L - minutes of "C" and "T";
CWSSA - critical water supply service area;
DCDA - double check detector assembly;
DCVA - double check valve assembly;
DWSRF - drinking water state revolving fund;
ERU - equivalent residential unit;
gph - gallons per hour;
gpm - gallons per minute;
GW - ground water under the direct influence of surface water;
HPC - heterotrophic plate count;
IAPMO - International Association of Plumbing and Mechanical Officials;
kPa - kilo pascal (SI units of pressure);
m - meter;
MCL - maximum contaminant level;
MDD - maximum day demand;
mg/L - milligrams per liter (1 mg/L = 1 ppm);
mL - milliliter;
mm - millimeter;
MTTP - maximum total trihalomethane potential;
NSF - National Sanitation Foundation;
NTNC - nontransient **noncommunity**;
NTU - nephelometric turbidity unit;
PAA - project approval application;
pCi/L - picocuries per liter;
PHD - peak hourly demand;
ppm - parts per million (1 ppm = 1 mg/L);
psi - pounds per square inch;
PVBA - pressure vacuum breaker assembly;
RPBA - reduced pressure backflow assembly;
RPDA - reduced pressure detector assembly;
SAL - state advisory level;
SCA - sanitary control area;
SDWA - Safe Drinking Water Act;
SEPA - State Environmental Policy Act;
SOC - synthetic organic chemical;
SMA - satellite management agency;
SPI - special purpose investigation;
SRF - state revolving fund;
SVBA - spill resistant vacuum breaker assembly;
SWTR - surface water treatment rule;
T - disinfectant contact time in minutes;
TTHM - total trihalomethane;
TNC - transient **noncommunity**;
TNTC - too numerous to count;
UBC - Uniform Building Code;

ug/L - micrograms per liter;
UL - Underwriters Laboratories, Inc.;
umhos/cm - micromhos per centimeter;
UPC - Uniform Plumbing Code;
UTC - utilities and transportation commission;
VOC - volatile organic chemical;
WAC - Washington Administrative Code;
WADOT - Washington department of transportation;
WFI - water facilities inventory and report form; and
WHPA - wellhead protection area.

"Acute" means posing an immediate risk to human health.

"Alternate filtration technology" means a filtration process for substantial removal of particulates (generally > 2 log *Giardia lamblia* cysts) by other than conventional, direct, diatomaceous earth, or slow sand filtration processes.

"Analogous treatment system" means an existing water treatment system that has unit processes and source water quality characteristics that are similar to a proposed treatment system.

"Approved air gap" means a physical separation between the free-flowing end of a potable water supply pipe-line and the overflow rim of an open or nonpressurized receiving vessel. To be an air gap approved by the department, the separation must be at least:

Twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls); and:

Three times the diameter of the supply piping, if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe, or if the horizontal distance between the supply pipe and intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe and in no case less than one and one-half inches.

"Approved atmospheric vacuum breaker" means an AVB of make, model, and size that is approved by the department. AVBs that appear on the current approved backflow prevention assemblies list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or that are listed or approved by other nationally recognized testing agencies (such as IAPMO, ANSI, or UL) acceptable to the local administrative authority are considered approved by the department.

"Approved backflow preventer" means an approved air gap, an approved backflow prevention assembly, or an approved AVB. The terms "approved backflow preventer," "approved air gap," or "approved backflow prevention assembly" refer only to those approved backflow preventers relied upon by the purveyor for the protection of the public water system. The requirements of WAC 246-290-490 do not apply to backflow preventers installed for other purposes.

"Approved backflow prevention assembly" means an RPBA, RPDA, DCVA, DCDA, PVBA, or SVBA of make, model, and size that is approved by the department. Assemblies that appear on the current approved backflow prevention assemblies list developed by the University of Southern

California Foundation for Cross-Connection Control and Hydraulic Research or other entity acceptable to the department are considered approved by the department.

"As-built drawing" means the drawing created by an engineer from the collection of the original design plans, including changes made to the design or to the system, that reflects the actual constructed condition of the water system.

"Authorized agent" means any person who:

Makes decisions regarding the operation and management of a public water system whether or not he or she is engaged in the physical operation of the system;

Makes decisions whether to improve, expand, purchase, or sell the system; or

Has discretion over the finances of the system.

"Average day demand (ADD)" means the total quantity of water use from all sources of supply as measured or estimated over a calendar year divided by three hundred sixty-five. ADD is typically expressed as gallons per day per ERU (gpd/ERU).

"Backflow" means the undesirable reversal of flow of water or other substances through a cross-connection into the public water system or consumer's potable water system.

"Backflow assembly tester" means a person holding a valid BAT certificate issued in accordance with chapter 246-292 WAC.

"Backpressure" means a pressure (caused by a pump, elevated tank or piping, boiler, or other means) on the consumer's side of the service connection that is greater than the pressure provided by the public water system and which may cause backflow.

"Backsiphonage" means backflow due to a reduction in system pressure in the purveyor's distribution system and/or consumer's water system.

"Best available technology (BAT)" means the best technology, treatment techniques, or other means that EPA finds, after examination for efficacy under field conditions, are available, taking cost into consideration.

"Blended sample" means a sample collected from two or more individual sources at a point downstream of the confluence of the individual sources and prior to the first connection.

"C" means the residual disinfectant concentration in mg/L at a point before or at the first consumer.

"Category red operating permit" means an operating permit identified as such pursuant to chapter 246-294 WAC. Placement in this category results in permit issuance with conditions and a determination that the system is inadequate.

"Chemical contaminant treatment facility" means a treatment facility specifically used for the purpose of removing chemical contaminants.

"Clarification" means a treatment process that uses gravity (sedimentation) or dissolved air (flotation) to remove flocculated particles.

"Closed system" means any water system or portion of a water system in which water is transferred to a higher pressure zone closed to the atmosphere, such as when no gravity storage is present.

"Coagulant" means a chemical used in water treatment to destabilize particulates and accelerate the rate at which they aggregate into larger particles.

"Coagulation" means a process using coagulant chemicals and rapid mixing to destabilize colloidal and suspended particles and agglomerate them into flocs.

"Combination fire protection system" means a fire sprinkler system that:

Is supplied only by the purveyor's water;

Does not have a fire department pumper connection; and

Is constructed of approved potable water piping and materials that serve both the fire sprinkler system and the consumer's potable water system.

"Completely treated water" means water from a surface or GWI source that receives filtration or disinfection treatment that fully complies with the treatment technique requirements of Part 6 of this chapter as determined by the department.

"Composite sample" means a sample in which more than one source is sampled individually by the water system and then composited by a certified laboratory by mixing equal parts of water from each source (up to five different sources) and then analyzed as a single sample.

"Comprehensive monitoring plan" means a schedule that describes both the frequency and appropriate locations for sampling of drinking water contaminants as required by state and federal rules.

"Confirmation" means to demonstrate the accuracy of results of a sample by analyzing another sample from the same location within a reasonable period of time, generally not to exceed two weeks. Confirmation is when analysis results fall within plus or minus thirty percent of the original sample results.

"Confluent growth" means a continuous bacterial growth covering a portion or the entire filtration area of a membrane filter in which bacterial colonies are not discrete.

"Conservation program" means policies and activities implemented to encourage or cause efficient use of water on a long-term basis. Conservation programs shall include identification of the conservation objectives of the purveyor, evaluation of conservation measures considered, and identification of specific conservation measures identified for implementation.

"Construction completion report" means a form provided by the department and completed for each specific construction project to document:

- Project construction in accordance with this chapter and general standards of engineering practice;
- Physical capacity changes; and
- Satisfactory test results.

The completed form must be stamped with an engineer's seal, and signed and dated by a professional engineer.

"Consumer" means any person receiving water from a public water system from either the meter, or the point where the service line connects with the distribution system if no meter is present. For purposes of cross-connection control, "consumer" means the owner or operator of a water system connected to a public water system through a service connection.

"Consumer's water system," as used in WAC 246-290-490, means any potable and/or industrial water system that begins at the point of delivery from the public water system and is located on the consumer's premises. The consumer's water system includes all auxiliary sources of supply, storage, treatment, and distribution facilities, piping, plumbing, and fixtures under the control of the consumer.

"Contaminant" means a substance present in drinking water that may adversely affect the health of the consumer or the aesthetic qualities of the water.

"Contingency plan" means that portion of the wellhead protection program section of the water system plan or small water system management program that addresses the replacement of the major well(s) or wellfield in the event of loss due to ground water contamination.

"Continuous monitoring" means determining water quality with automatic recording analyzers that operate without interruption twenty-four hours per day.

"Conventional filtration treatment" means a series of processes including coagulation, flocculation, clarification, and filtration that together result in substantial particulate removal ($> = 2.5 \log$ *Giardia lamblia* cysts).

"Critical water supply service area (CWSSA)" means a geographical area which is characterized by a proliferation of small, inadequate water systems, or by water supply problems which threaten the present or future water quality or reliability of service in such a manner that efficient and orderly development may best be achieved through coordinated planning by the water utilities in the area.

"Cross-connection" means any actual or potential physical connection between a public water system or the consumer's water system and any source of nonpotable liquid, solid, or gas that could contaminate the potable water supply by backflow.

"Cross-connection control program" means the administrative and technical procedures the purveyor implements to protect the public water system from contamination via cross-connections as required in WAC 246-290-490.

"Cross-connection control specialist" means a person holding a valid CCS certificate issued in accordance with chapter 246-292 WAC.

"Cross-connection control summary report" means the annual report that describes the status of the purveyor's cross-connection control program.

"CT" or **"CTcalc"** means the product of "residual disinfectant concentration" (C) and the corresponding "disinfectant contact time" (T) i.e., "C" x "T".

"CT_{99.9}" means the CT value required for 99.9 percent (3 log) inactivation of *Giardia lamblia* cysts.

"CTreq" means the CT value a system shall provide to achieve a specific percent inactivation of *Giardia lamblia* cysts or other pathogenic organisms of health concern as directed by the department.

"Curtailement" means short-term, infrequent actions by a purveyor and its consumers to reduce their water use during or in anticipation of a water shortage.

"Dead storage" means the volume of stored water not available to all consumers at the minimum design pressure in accordance with WAC 246-290-230 (5) and (6).

"Demand forecast" means an estimate of future water system water supply needs assuming historically normal weather conditions and calculated using numerous parameters, including population, historic water use, local land use plans, water rates and their impacts on consumption, employment, projected conservation savings from implementation of a conservation program, and other appropriate factors.

"Department" means the Washington state department of health or health officer as identified in a joint plan of operation in accordance with WAC 246-290-030(1).

"Design and construction standards" means department design guidance and other peer reviewed documents generally accepted by the engineering profession as containing fundamental criteria for design and construction of water facility projects. Design and construction standards are comprised of performance and sizing criteria and reference general construction materials and methods.

"Diatomaceous earth filtration" means a filtration process for substantial removal of particulates ($> 2 \log$ *Giardia lamblia* cysts) in which:

A precoat cake of graded diatomaceous earth filter media is deposited on a support membrane (septum); and

Water is passed through the cake on the septum while additional filter media, known as body feed, is continuously added to the feed water to maintain the permeability of the filter cake.

"Direct filtration" means a series of processes including coagulation, flocculation, and filtration (but excluding sedimentation) that together result in substantial particulate removal ($> 2 \log$ *Giardia lamblia* cysts).

"Direct service connection" means a service hookup to a property that is contiguous to a water distribution main and where additional distribution mains or extensions are not needed to provide service.

"Disinfectant contact time (T in CT)" means: When measuring the first or only C, the time in minutes it takes water to move from the point of disinfectant application to a point where the C is measured; and

For subsequent measurements of C, the time in minutes it takes water to move from one C measurement point to the C measurement point for which the particular T is being calculated.

"Disinfection" means the use of chlorine or other agent or process the department approves for killing or inactivating microbiological organisms, including pathogenic and indicator organisms.

"Distribution coliform sample" means a sample of water collected from a representative location in the distribution system at or after the first service and analyzed for coliform presence in compliance with this chapter.

"Distribution-related projects" means distribution projects such as storage tanks, booster pump facilities, transmission mains, pipe linings, and tank coating. It does not mean source of supply (including interties) or water quality treatment projects.

"Distribution reservoir" means a water storage structure that is integrated with a water system's distribution network to provide for variable system demands including, but not limited to, daily equalizing storage, standby storage, or fire reserves, or to provide for disinfectant contact time.

"Distribution system" means all piping components of a public water system that serve to convey water from transmission mains linked to source, storage and treatment facilities to the consumer excluding individual services.

"Domestic or other nondistribution system plumbing problem," means contamination of a system having more than one service connection with the contamination limited to the specific service connection from which the sample was taken.

"Drinking water state revolving fund (DWSRF)" means the revolving loan program financed by the state and federal governments and managed by the state for the purpose of assisting water systems to meet their capital needs associated with complying with the federal Safe Drinking Water Act.

"Duplicate (verification) sample" means a second sample collected at the same time and location as the first sample and used for verification.

"Emergency" means an unforeseen event that causes damage or disrupts normal operations and requires immediate action to protect public health and safety.

"Emergency source" means any source that is approved by the department for emergency purposes only, is not used for routine or seasonal water demands, is physically disconnected, and is identified in the purveyor's emergency response plan.

"Engineering design review report" means a form provided by the department and completed for a specific distribution-related project to document:

- Engineering review of a project report and/or construction documents under the submittal exception process in accordance with WAC 246-290-125(3); and
- Design in accordance with this chapter and general standards of engineering practice.

The completed form must be stamped with engineer's seal, and signed and dated by a professional engineer.

"Equalizing storage" means the volume of storage needed to supplement supply to consumers when the peak hourly demand exceeds the total source pumping capacity.

"Equivalent residential unit (ERU)" means a system-specific unit of measure used to express the amount of water consumed by a typical full-time single family residence.

"Expanding public water system" means a public water system installing additions, extensions, changes, or alterations to their existing source, transmission, storage, or distribution facilities that will enable the system to increase in size its existing service area and/or its number of approved service connections. Exceptions:

A system that connects new approved individual retail or direct service connections onto an existing distribution system within an existing service area; or

A distribution system extension in an existing service area identified in a current and approved water system plan or project report.

"Filtration" means a process for removal of particulate matter from water by passage through porous media.

"Financial viability" means the capability of a water system to obtain sufficient funds to construct, operate, maintain, and manage a public water system, on a continuing basis, in full compliance with federal, state, and local requirements.

"Fire flow" means the maximum rate and duration of water flow needed to suppress a fire under WAC 246-293-640 or as required under local fire protection authority standards.

"Fire suppression storage" means the volume of stored water available during fire suppression activities to satisfy minimum pressure requirements per WAC 246-290-230.

"First consumer" means the first service connection associated with any source (i.e., the point where water is first withdrawn for human consumption, excluding connections where water is delivered to another water system covered by these regulations).

"Flocculation" means a process enhancing agglomeration and collection of colloidal and suspended particles into larger, more easily settleable or filterable particles by gentle stirring.

"Flow-through fire protection system" means a fire sprinkler system that:

Is supplied only by the purveyor's water;

Does not have a fire department pumper connection;

Is constructed of approved potable water piping and materials to which sprinkler heads are attached; and

Terminates at a connection to a toilet or other plumbing fixture to prevent the water from becoming stagnant.

"Grab sample" means a water quality sample collected at a specific instant in time and analyzed as an individual sample.

"Ground water under the direct influence of surface water (GWI)" means any water beneath the surface of the ground that the department determines has the following characteristics:

Significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*; or

Significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH closely correlating to climatological or surface water conditions where natural conditions cannot prevent the introduction of surface water pathogens into the source at the system's point of withdrawal.

"Guideline" means a department document assisting the purveyor in meeting a rule requirement.

"Health officer" means the health officer of the city, county, city-county health department or district, or an authorized representative.

"Heterotrophic Plate Count (HPC)" means a procedure to measure a class of bacteria that use organic nutrients for growth. The density of these bacteria in drinking water is measured as colony forming units per milliliter and is referred to as the HPC.

"High health cross-connection hazard" means a cross-connection which could impair the quality of potable

water and create an actual public health hazard through poisoning or spread of disease by sewage, industrial liquids or waste.

"Human consumption" means the use of water for drinking, bathing or showering, hand washing, food preparation, cooking, or oral hygiene.

"Hydraulic analysis" means the study of a water system's distribution main and storage network to determine present or future adequacy for provision of service to consumers within the established design parameters for the system under peak flow conditions, including fire flow. The analysis is used to establish any need for improvements to existing systems or to substantiate adequacy of design for distribution system components such as piping, elevated storage, booster stations or similar facilities used to pump and convey water to consumers.

"Inactivation" means a process which renders pathogenic microorganisms incapable of producing disease.

"Inactivation ratio" means the ratio obtained by dividing CT_{calc} by CT_{req}.

"Incompletely treated water" means water from a surface or GWI source that receives filtration and/or disinfection treatment that does not fully comply with the treatment technique requirements of Part 6 of this chapter as determined by the department.

"In-line filtration" means a series of processes, including coagulation and filtration (but excluding flocculation and sedimentation) that together result in particulate removal.

"In-premises protection" means a method of protecting the health of consumers served by the consumer's potable water system, located within the property lines of the consumer's premises by the installation of an approved air gap or backflow prevention assembly at the point of hazard, which is generally a plumbing fixture.

"Intertie" means an interconnection between public water systems permitting the exchange or delivery of water between those systems.

"Legionella" means a genus of bacteria containing species which cause a type of pneumonia called Legionnaires' Disease.

"Limited alternative to filtration" means a process that ensures greater removal and/or inactivation efficiencies of pathogenic organisms than would be achieved by the combination of filtration and chlorine disinfection.

"Local administrative authority" means the local official, board, department, or agency authorized to administer and enforce the provisions of the Uniform Plumbing Code as adopted under chapter 19.27 RCW.

"Low health cross-connection hazard" means a cross-connection that could cause an impairment of the quality of potable water to a degree that does not create a hazard to the public health, but does adversely and unreasonably affect the aesthetic qualities of such potable waters for domestic use.

"Major project" means all construction projects subject to SEPA in accordance with WAC 246-03-030 (3)(a) and include all surface water source development, all water system storage facilities greater than one-half million gallons, new transmission lines longer than one thousand feet and larger than eight inches in diameter located in new rights of

way and major extensions to existing water distribution systems involving use of pipes greater than eight inches in diameter, that are designed to increase the existing service area by more than one square mile.

"Mandatory curtailment" means curtailment required by a public water system of specified water uses and consumer classes for a specified period of time.

"Maximum contaminant level (MCL)" means the maximum permissible level of a contaminant in water the purveyor delivers to any public water system user, measured at the locations identified under WAC 246-290-300, Table 3.

"Maximum contaminant level violation" means a confirmed measurement above the MCL and for a duration of time, where applicable, as outlined under WAC 246-290-310.

"Maximum day demand (MDD)" means the highest actual or estimated quantity of water that is, or is expected to be, used over a twenty-four hour period, excluding unusual events or emergencies. MDD is typically expressed as gallons per day per ERU (gpd/ERU).

"Monitoring waiver" means an action taken by the department pursuant to WAC 246-290-300 (4)(g) or (7)(f) to allow a water system to reduce specific monitoring requirements based on a determination of low source vulnerability to contamination.

"Nested storage" means one component of storage is contained within the component of another.

"Nonacute" means posing a possible or less than immediate risk to human health.

"Nonresident" means a person having access to drinking water from a public water system, but who lives elsewhere. Examples include travelers, transients, employees, students, etc.

"Normal operating conditions" means those conditions associated with the designed, day-to-day provision of potable drinking water that meets regulatory water quality standards and the routine service expectations of the system's consumers at all times, including meeting fire flow demands. Operation under conditions such as power outages, floods, or unscheduled transmission or distribution disruptions, even if considered in the system design, are considered abnormal.

"Operational storage" means the volume of distribution storage associated with source or booster pump normal cycling times under normal operating conditions and is additive to the equalizing and standby storage components, and to fire flow storage if this storage component exists for any given tank.

"Peak hourly demand (PHD)" means the maximum rate of water use, excluding fire flow, that can be expected to occur within a defined service area over a continuous sixty minute time period. PHD is typically expressed in gallons per minute (gpm).

"Peak hourly flow" means, for the purpose of CT calculations, the greatest volume of water passing through the system during any one hour in a day.

"Performance criteria" means the level at which a system shall operate in order to maintain system reliability compliance, in accordance with WAC 246-290-420, and to meet consumers' reasonable expectations.

"Permanent residence" means any dwelling that is, or could reasonably be expected to be, occupied on a continuous basis.

"Permanent source" means a public water system supply source that is used regularly each year, and based on expected operational requirements of the system, will be used more than three consecutive months in any twelve-month period. For seasonal water systems that are in operation for less than three consecutive months per year, their sources shall also be considered to be permanent.

"Point of disinfectant application" means the point where the disinfectant is added, and where water downstream of that point is not subject to contamination by untreated surface water.

"Population served" means the number of persons, resident and nonresident, having immediate access to drinking water from a public water system, whether or not such persons have actually consumed water from that system. The number of nonresidents shall be the average number of persons having immediate access to drinking water on days access was provided during that month. In the absence of specific population data, the number of residents shall be computed by multiplying the number of active services by two and one-half.

"Potable" means water suitable for drinking by the public.

"Potential GWI" means a source identified by the department as possibly under the influence of surface water, and includes, but is not limited to, all wells with a screened interval fifty feet or less from the ground surface at the well-head and located within two hundred feet of a surface water, and all Ranney wells, infiltration galleries, and springs.

"Premises isolation" means a method of protecting a public water system by installation of approved air gaps or approved backflow prevention assemblies at or near the service connection or alternative location acceptable to the purveyor to isolate the consumer's water system from the purveyor's distribution system.

"Pressure filter" means an enclosed vessel containing properly sized and graded granular media through which water is forced under greater than atmospheric pressure.

"Primary disinfection" means a treatment process for achieving inactivation of *Giardia lamblia* cysts, viruses, or other pathogenic organisms of public health concern to comply with the treatment technique requirements of Part 6 of this chapter.

"Primary standards" means standards based on chronic, nonacute, or acute human health effects.

"Primary turbidity standard" means an accurately prepared formazin solution or commercially prepared polymer solution of known turbidity (prepared in accordance with "standard methods") that is used to calibrate bench model and continuous turbidimeters (instruments used to measure turbidity).

"Project approval application (PAA)" means a department form documenting ownership of water system, design engineer for the project, and type of project.

"Protected ground water source" means a ground water source the purveyor shows to the department's satisfac-

tion as protected from potential sources of contamination on the basis of hydrogeologic data and/or satisfactory water quality history.

"Public water system" is defined and referenced under WAC 246-290-020.

"Purchased source" means water a purveyor purchases from a public water system not under the control of the purveyor for distribution to the purveyor's consumers.

"Purveyor" means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or other entity owning or operating a public water system. Purveyor also means the authorized agents of such entities.

"Reclaimed water" means effluent derived in any part from sewage from a wastewater treatment system that has been adequately and reliably treated, so that as a result of that treatment, it is suitable for beneficial use or a controlled use that would not otherwise occur, and it is no longer considered wastewater.

"Record drawings" means the drawings bearing the seal and signature of a professional engineer that reflect the modifications made to construction documents, documenting actual constructed conditions of the water system facilities.

"Recreational tract" means an area that is clearly defined for each occupant, but has no permanent structures with internal plumbing, and the area has been declared as such in the covenants or on the recorded plat in order to be eligible for reduced design considerations.

"Regional public water supplier" means a water system that provides drinking water to one, or more, other public water systems.

"Regularly" means four hours or more per day for four days or more per week.

"Removal credit" means the level (expressed as a percent or log) of *Giardia* and virus removal the department grants a system's filtration process.

"Repeat sample" means a sample collected to confirm the results of a previous analysis.

"Resident" means an individual living in a dwelling unit served by a public water system.

"Residual disinfectant concentration" means the analytical level of a disinfectant, measured in milligrams per liter, that remains in water following the application (dosing) of the disinfectant after some period of contact time.

"Same farm" means a parcel of land or series of parcels that are connected by covenants and devoted to the production of livestock or agricultural commodities for commercial purposes and does not qualify as a **Group A** public water system.

"Sanitary survey" means a review, inspection, and assessment of a public water system by the department or department designee including, but not limited to: Source, facilities, equipment, administration and operation, maintenance procedures, monitoring, recordkeeping, planning documents and schedules, and management practices. The purpose of the survey is to evaluate the adequacy of the water system for producing and distributing safe and adequate drinking water.

"Satellite management agency (SMA)" means a person or entity that is approved by the department to own or operate public water systems on a regional or county-wide basis without the necessity for a physical connection between such systems.

"Seasonal source" means a public water system source used on a regular basis, that is not a permanent or emergency source.

"Secondary standards" means standards based on factors other than health effects.

"Service connection" means a connection to a public water system designed to provide potable water to a single family residence, or other residential or nonresidential population. When the connection provides water to a residential population without clearly defined single family residences, the following formulas shall be used in determining the number of services to be included as residential connections on the WFI form:

Divide the average population served each day by two and one-half; or

Using actual water use data, calculate the total ERUs represented by the service connection in accordance with department design guidance.

In no case shall the calculated number of services be less than one.

"Significant noncomplier" means a system that is violating or has violated department rules, and the violations may create, or have created an imminent or a significant risk to human health. Such violations include, but are not limited to, repeated violations of monitoring requirements, failure to address an exceedance of permissible levels of regulated contaminants, or failure to comply with treatment technique standards or requirements.

"Simple disinfection" means any form of disinfection that requires minimal operational control in order to maintain the disinfection at proper functional levels, and that does not pose safety concerns that would require special care, equipment, or expertise. Examples include hypochlorination, UV-light, contactor chlorination, or any other form of disinfection practice that is safe to use and easy to routinely operate and maintain.

"Slow sand filtration" means a process involving passage of source water through a bed of sand at low velocity (generally less than 0.10 gpm/ft²) that results in substantial particulate removal (> 2 log *Giardia lamblia* cysts) by physical and biological mechanisms.

"Source meter" means a meter that measures total output of a water source over specific time periods.

"Source water" means untreated water that is not subject to recontamination by surface runoff and:

For unfiltered systems, enters the system immediately before the first point of disinfectant application; and

For filtered systems, enters immediately before the first treatment unit of a water treatment facility.

"Special purpose investigation (SPI)" means on-site inspection of a public water system by the department or designee to address a potential public health concern, regulatory violation, or consumer complaint.

"Special purpose sample" means a sample collected for reasons other than the monitoring compliance specified in this chapter.

"Spring" means a source of water where an aquifer comes in contact with the ground surface.

"Standard methods" means the 18th edition of the book, titled *Standard Methods for the Examination of Water and Waste Water*, jointly published by the American Public Health Association, American Water Works Association (AWWA), and Water Pollution Control Federation. This book is available through public libraries or may be ordered from AWWA, 6666 West Quincy Avenue, Denver, Colorado 80235.

"Standby storage" means the volume of stored water available for use during a loss of source capacity, power, or similar short-term emergency.

"State advisory level (SAL)" means a level established by the department and state board of health for a contaminant without an existing MCL. The SAL represents a level that when exceeded, indicates the need for further assessment to determine if the chemical is an actual or potential threat to human health.

"State board of health" and **"board"** means the board created by RCW 43.20.030.

"Surface water" means a body of water open to the atmosphere and subject to surface runoff.

"Susceptibility assessment" means the completed Susceptibility Assessment Survey Form developed by the department to evaluate the hydrologic setting of the water source and assess its contribution to the source's overall susceptibility to contamination from surface activities.

"Synthetic organic chemical (SOC)" means a manufactured carbon-based chemical.

"System capacity" means the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with all relevant local, state, and federal plans and regulations.

"System physical capacity" means the maximum number of service connections or equivalent residential units (ERUs) that the system can serve when considering the limitation of each system component such as source, treatment, storage, transmission, or distribution, individually and in combination with each other.

"Time-of-travel" means the time required for ground water to move through the water bearing zone from a specific point to a well.

"Too numerous to count (TNTC)" means the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

"Tracer study" means a field study conducted to determine the disinfectant contact time, T, provided by a water system component, such as a clearwell or storage reservoir, used for *Giardia lamblia* cyst and virus inactivation. The study involves introducing a tracer chemical at the inlet of the contact basin and measuring the resulting outlet tracer concentration as a function of time.

"Transmission line" means pipes used to convey water from source, storage, or treatment facilities to points of distri-

bution or distribution mains, and from source facilities to treatment or storage facilities. This also can include transmission mains connecting one section of distribution system to another section of distribution system as long as this transmission main is clearly defined as such on the plans and no service connections are allowed along the transmission main.

"Treatment technique requirement" means a department-established requirement for a public water system to provide treatment, such as filtration or disinfection, as defined by specific design, operating, and monitoring requirements. A "treatment technique requirement" is established in lieu of a primary MCL when monitoring for the contaminant is not economically or technologically feasible.

"Trihalomethane (THM)" means one of a family of organic compounds, named as derivatives of methane, where three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure. THMs may occur when chlorine, a halogen, is added to water containing organic material and are generally found in water samples as disinfection byproducts.

"Turbidity event" means a single day or series of consecutive days, not to exceed fourteen, when one or more turbidity measurement each day exceeds 5 NTU.

"T10" means the time it takes ten percent of the water passing through a system contact tank intended for use in the inactivation of *Giardia lamblia* cysts, viruses, and other microorganisms of public health concern, as determined from a tracer study conducted at peak hourly flow or from published engineering reports or guidance documents for similarly configured tanks.

"Unapproved auxiliary water supply" means a water supply (other than the purveyor's water supply) on or available to the consumer's premises that is either not approved for human consumption by the health agency having jurisdiction or is not otherwise acceptable to the purveyor.

"Uncovered distribution reservoir" means a distribution reservoir that is open, without a suitable water-tight roof or cover, where the potable water supply is exposed to external contaminants, including but not limited to people, birds, animals, and insects.

"Uniform Plumbing Code" means the code adopted under RCW 19.27.031(4) and amended under chapter 51-46 WAC. This code establishes statewide minimum plumbing standards applicable within the property lines of the consumer's premises.

"Used water" means water which has left the control of the purveyor.

"Verification" means to demonstrate the results of a sample to be precise by analyzing a duplicate sample. Verification occurs when analysis results fall within plus or minus thirty percent of the original sample.

"Virus" means a virus of fecal origin which is infectious to humans and transmitted through water.

"Volatile organic chemical (VOC)" means a manufactured carbon-based chemical that vaporizes quickly at standard pressure and temperature.

"Voluntary curtailment" means a curtailment of water use requested, but not required of consumers.

"Waterborne disease outbreak" means the significant occurrence of acute infectious illness, epidemiologically associated with drinking water from a public water system, as determined by the appropriate local health agency or the department.

"Water facilities inventory (WFI) form" means the department form summarizing each public water system's characteristics.

"Water right" means a permit, claim, or other authorization, on record with or accepted by the department of ecology, authorizing the beneficial use of water in accordance with all applicable state laws.

"Water right assessment" means an evaluation of the legal ability of a water system to use water for existing or proposed usages in conformance with state water right laws. Such an assessment may be done by a water system, a purveyor, the department of ecology, or any combination thereof.

"Watershed" means the region or area that:

Ultimately drains into a surface water source diverted for drinking water supply; and

Affects the physical, chemical, microbiological, and radiological quality of the source.

"Water shortage" means a situation during which the water supplies of a system cannot meet normal water demands for the system, including peak periods.

"Water shortage response plan" means a plan outlining policies and activities to be implemented to reduce water use on a short-term basis during or in anticipation of a water shortage.

"Well field" means a group of wells one purveyor owns or controls that:

Draw from the same aquifer or aquifers as determined by comparable inorganic chemical analysis and comparable static water level and top of the open interval elevations; and

Discharge water through a common pipe and the common pipe shall allow for collection of a single sample before the first distribution system connection.

"Wellhead protection area (WHPA)" means the portion of a well's, wellfield's or spring's zone of contribution defined as such using WHPA criteria established by the department.

"Zone of contribution" means the area surrounding a pumping well or spring that encompasses all areas or features that supply ground water recharge to the well or spring.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-010, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-010, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-010, filed 3/25/93, effective 4/25/93; 92-04-070 (Order 241B), § 246-290-010, filed 2/4/92, effective 3/6/92. Statutory Authority: Chapter 43.20 RCW. 91-07-031 (Order 150B), § 246-290-010, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-010, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-015, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-015, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-015, filed 9/8/83.]

WAC 246-290-020 Applicability. (1) Public water system shall mean any system providing water for human consumption through pipes or other constructed conveyances,

excluding a system serving only one single-family residence and a system with four or fewer connections all of which serve residences on the same farm. Such term includes:

(a) Collection, treatment, storage, and/or distribution facilities under control of the purveyor and used primarily in connection with such system; and

(b) Collection or pretreatment storage facilities not under control of the purveyor, but primarily used in connection with such system.

(2) The rules of this chapter shall apply to all **Group A** public water systems except those systems meeting all of the following conditions:

(a) Consists only of distribution and/or storage facilities and does not have any source or treatment facilities;

(b) Obtains all water from, but is not owned by, a public water system where the rules of this chapter apply;

(c) Does not sell water directly to any person; and

(d) Is not a passenger-conveying carrier in interstate commerce.

(3) **Group A** public water systems meeting all of the provisions under subsection (2) of this section may be required by the department to comply with such provisions of this chapter as are necessary to resolve a public health concern if the department determines a public health threat exists or is suspected.

(4) A **Group A** system shall be defined as a public water system providing service such that it meets the definition of a public water system provided in the 1996 amendments to the federal Safe Drinking Water Act (Public Law 104-182, Section 101, subsection b).

(5) **Group A** water systems are further defined as **community** and **noncommunity** water systems.

(a) **Community** water system means any **Group A** water system providing service to fifteen or more service connections used by year-round residents for one hundred eighty or more days within a calendar year, regardless of the number of people, or regularly serving at least twenty-five year-round (i.e., more than one hundred eighty days per year) residents.

Examples of a **community** water system might include a municipality, subdivision, mobile home park, apartment complex, college with dormitories, nursing home, or prison.

(b) **Noncommunity** water system means a **Group A** water system that is not a **community** water system. **Noncommunity** water systems are further defined as:

(i) **Nontransient (NTNC)** water system that provides service opportunity to twenty-five or more of the same non-residential people for one hundred eighty or more days within a calendar year.

Examples of a **NTNC** water system might include a school, day care center, or a business, factory, motel, or restaurant with twenty-five or more employees on-site.

(ii) **Transient (TNC)** water system that serves:

(A) Twenty-five or more different people each day for sixty or more days within a calendar year;

(B) Twenty-five or more of the same people each day for sixty or more days, but less than one hundred eighty days within a calendar year; or

(C) One thousand or more people for two or more consecutive days within a calendar year.

Examples of a **TNC** water system might include a restaurant, tavern, motel, campground, state or county park, an RV park, vacation cottages, highway rest area, fairground, public concert facility, special event facility, or church.

(c) A **Group B** water system is a public water system that does not meet the definition of a **Group A** water system. (See Table 1 and chapter 246-291 WAC for further explanation of a **Group B** water system.)

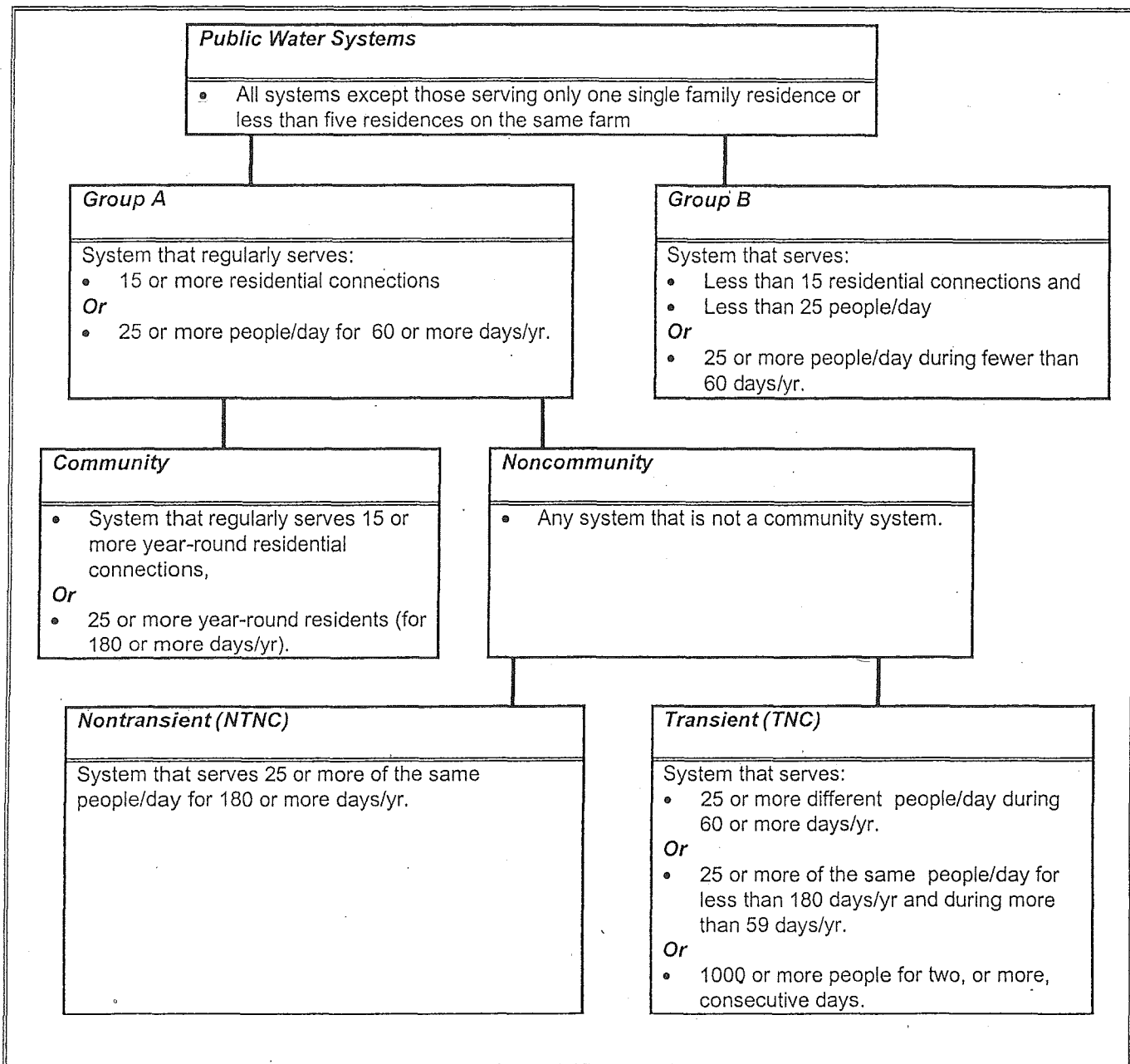
(6) A **Group A** system meeting more than one of the categories described in this section shall be classified by the department in the following order:

(a) **Community** water system;

(b) **NTNC** water system; or

(c) **TNC** water system.

Table 1



[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-020, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-020, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-020, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-020, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-006, filed 10/10/89, effective 11/10/89.]

WAC 246-290-025 Adoption by reference. The following sections and subsections of Title 40 Code of Federal Regulations (CFR) Part 141 National Primary Drinking Water Regulations revised as of July 1, 1996, and including all amendments and modifications thereto effective as of the date of adoption of this chapter are adopted by reference:

141.2 Definitions. Only those definitions listed as follows:

- Action level;
- Corrosion inhibitor;
- Effective corrosion inhibitor residual;
- First draw sample;
- Large water system;
- Lead service line;
- Medium-size water system;
- Optimal corrosion control treatment;
- Service line sample;
- Single family structure; and
- Small water system.
- 141.12 Maximum contaminant levels for organic chemicals.
- 141.13 Maximum contaminant levels for turbidity.
- 141.21 Coliform monitoring.
- 141.22 Turbidity sampling and analytical requirements.
- 141.23(a) - 141.23(j), Inorganic chemical sampling.
- 141.23(m) - 141.23(o)
- 141.24(a) - 141.24(d), Organic chemicals other than total trihalomethanes.
- 141.24 (f)(1) - 141.24 (f)(15),
- 141.24 (f)(18), 141.24 (f)(19),
- 141.24 (f)(21),
- 141.24 (g)(1) - 141.24 (g)(9),
- 141.24 (g)(12) - 141.24 (g)(14),
- 141.24 (h)(1) - 141.24 (h)(11),
- 141.24 (h)(14) - 141.24 (h)(17)
- 141.40(a) - 141.40(e), Special monitoring for inorganic and organic chemicals.
- 141.40(g), 141.40(i) - 141.40(n)
- 141.61 Maximum contaminant levels for organic contaminants.
- 141.62 Maximum contaminant levels for inorganic chemical and physical contaminants.
- Control of Lead and Copper
- 141.80 General requirements.
- 141.81 Applicability of corrosion control treatment steps to small, medium-size and large water systems.
- 141.82(a) - 141.82(h) Description of corrosion control treatment requirements.
- 141.83 Source water treatment requirements.
- 141.84 Lead service line replacement requirements.
- 141.85 Public education and supplemental monitoring requirements.
- 141.86 Monitoring requirements for lead and copper in tap water.
- 141.87 Monitoring requirements for water quality parameters.
- 141.88 Monitoring requirements for lead and copper in source water.
- 141.90 Reporting requirements.
- 141.91 Recordkeeping requirements.
- 143.1-143.5 Secondary contaminants.

Copies of the incorporated sections and subsections of Title 40 CFR are available from the Department of Health, Airstrial Center Building 3, P.O. Box 47822, Olympia, Washington 98504-7822, or by calling the department's drinking water hotline at 1-800-521-0323.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-025, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-025, filed 6/22/94, effective 7/23/94.]

WAC 246-290-030 General administration. (1) The department and the health officer for each local health jurisdiction may develop a joint plan of operation. This plan shall:

- (a) List the roles and responsibilities of each agency;
- (b) Specifically designate those **Group A** systems for which the department and local health officer have primary responsibility;
- (c) Provide for an agreed-to level of public water system oversight;
- (d) Be signed by the department and the local health department or district; and
- (e) Be reviewed at least once every five years and updated as needed.

Wherever in this chapter the term "department" is used, the term "health officer" may be substituted based on the terms of this plan of operation.

(2) The department shall, upon request, review and report on the adequacy of water supply supervision to both the state and local boards of health.

(3) The local board of health may adopt rules governing **Group A** water systems within its jurisdiction for which the health officer has assumed primary responsibility. Adopted local board of health rules shall be:

- (a) No less stringent than this chapter; and
- (b) Revised, if necessary, within twelve months after the effective date of revised state board of health rules. During this time period, existing local rules shall remain in effect, except provisions of the revised state board of health rules that are more stringent than the local board of health rules shall apply.

(4) For those **Group A** water systems where the health officer has assumed primary responsibility, the health officer may approve project reports and construction documents in accordance with engineering criteria approved by the department and listed under Part 3 of this chapter and water system plans in accordance with planning criteria listed under WAC 246-290-100.

(5) An advisory committee shall be established to provide advice to the department on the organization, functions, service delivery methods, and funding of the drinking water program. Members shall be appointed by the department for fixed terms of no less than two years, and may be reappointed. The committee shall reflect a broad range of interests in the regulation of public water supplies, including water utilities of all sizes, local governments, business groups, special purpose districts, local health jurisdictions, other state and federal agencies, financial institutions, environmental organizations, the legislature, professional engineers engaged in water system design, and other groups substantially affected by the department's role in implementing state and federal requirements for public water systems.

(6) The department may develop guidance to clarify sections of the rules as needed and make these available for distribution. Copies of the guidance may be obtained by contacting the division of drinking water.

(7) Fees may be charged and collected by the department as authorized in chapter 43.20B RCW and by local health agencies as authorized in RCW 70.05.060 to recover all or a portion of the costs incurred in administering this chapter or that are required to be paid under WAC 246-290-990.

(8) All state and local agencies involved in review, approval, surveillance, testing, and/or operation of public water systems, or issuance of permits for buildings or sewage systems shall be governed by these rules and any decisions of the department.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-030, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-030, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-030, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-030, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-025, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-025, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-025, filed 9/8/83.]

WAC 246-290-035 Water system ownership. (1) The following requirements apply to all newly developed public water systems:

(a) Except for systems proposed within an individual water system's approved service area in a critical water supply service area as governed by the Public Water System Coordination Act, chapter 70.116 RCW and chapter 246-293 WAC, and offered service by that existing system, any proposed new public water system must be owned or operated by a department approved satellite management agency (SMA) if one is available;

(b) The approval of any proposed new public water system shall be conditioned upon the periodic review of the system's operational history to determine its ability to meet the department's financial viability and other operating requirements. If, upon periodic review, the department determines the system is in violation of financial viability or other operating requirements, the system shall transfer ownership to an approved SMA or obtain operation and management by an approved SMA, if such ownership or operation and management can be made with reasonable economy and efficiency.

(2) An owner of a public water system who is proposing to transfer or has transferred ownership shall:

(a) Provide written notice to the department and all consumers at least one year prior to the transfer, unless the new owner agrees to an earlier date. Notification shall include a time schedule for transferring responsibilities, identification of the new owner, and under what authority the new ownership will operate. If the system is a corporation, identification of the registered agent shall also be provided;

(b) Ensure all health-related standards pursuant to this chapter are met during transfer of the utility. It shall also be the responsibility of the utility transferring ownership to inform and train the new owner regarding operation of the utility; and

(c) Comply with the operating permit requirements pursuant to chapter 246-294 WAC.

(3) The purveyor may be required to document compliance with other relevant ownership requirements, such as those pursuant to UTC jurisdiction under Title 80 RCW.

(4) No purveyor may end utility operations without providing written notice to all customers and to the department at least one year prior to termination of service. A purveyor that fails to provide such notice remains subject to the provisions of this chapter.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-035, filed 3/9/99, effective 4/9/99.]

WAC 246-290-040 Engineering requirements. (1) Purveyors shall ensure that all work required to be prepared under the direction of a professional engineer, including, but not limited to, water system plans, project reports, corrosion control recommendation reports, tracer studies, construction documents and construction completion reports, and engineering design review reports for distribution-related submittal exceptions, is prepared under the direction, and bears the seal, date, and signature of a professional engineer:

(a) Licensed in the state of Washington under chapter 18.43 RCW; and

(b) Having specific expertise regarding design, operation, and maintenance of public water systems.

(2) Exceptions to this requirement are projects identified under WAC 246-290-125 (1)(a) through (d).

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-040, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-040, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-040, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-040, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-035, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-035, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-035, filed 9/8/83.]

WAC 246-290-050 Enforcement. When any purveyor is out of compliance with a law or rule regulating public water systems and administered by the department, the department may initiate appropriate enforcement actions, regardless of any prior approvals issued. These actions may include, but are not limited to, any one or combination of the following:

(1) Notice of violation instructing or requiring appropriate corrective measures;

(2) Compliance schedule for specific actions necessary to achieve compliance status;

(3) Departmental order requiring submission of project reports, construction documents, and construction report forms;

(4) Departmental order requiring specific actions or ceasing unacceptable activities within a designated time period;

(5) Departmental order to stop work and/or refrain from using any public water system or improvements thereto until all written approvals required by statute or rule are obtained;

(6) Imposition of civil penalties may be issued for up to five thousand dollars per day per violation, or, in the case of a violation that has been determined to be a public health emergency, a penalty of not more than ten thousand dollars

per day per violation under authority of chapter 70.119A RCW;

(7) Imposition of civil penalties may be issued to a person who constructs, modifies, or expands a public water system or who commences the construction, modification, or expansion of a public water system without first obtaining the required department approval. The amount of the penalty may be up to five thousand dollars per service connection, or, in the case of a system serving a transient population, a penalty of not more than four hundred dollars per person based on the highest average daily population the system serves or is anticipated to serve. The total penalty that may be imposed pursuant to this subsection and RCW 70.119A.040 (1)(b) is five hundred thousand dollars;

(8) Action that requires the purveyor to take preventive or corrective steps when results of a sanitary survey or special purpose investigation conducted by, or on behalf of, the department indicate conditions that are currently or may become a detriment to system operation;

(9) Legal action may be taken by the attorney general or local prosecutor. The legal action may be criminal or civil.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-050, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-050, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-050, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-045, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-045, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-045, filed 9/8/83.]

WAC 246-290-060 Variances, exemptions, and waivers. (1) General.

(a) The state board of health may grant variances, exemptions, and waivers of the requirements of this chapter according to the procedures outlined in subsection (5) of this section. See WAC 246-290-300 (4)(g) and (7)(f) for monitoring waivers.

(b) Consideration by the board of requests for variances, exemptions, and waivers shall not be considered adjudicative proceedings as that term is defined in chapter 34.05 RCW.

(c) Statements and written material regarding the request may be presented to the board at or before the public hearing wherein the application will be considered. Allowing cross-examination of witnesses shall be within the discretion of the board.

(d) The board may grant a variance, exemption, or waiver if it finds:

(i) Due to compelling factors, the public water system is unable to comply with the requirements; and

(ii) The granting of the variance, exemption, or waiver will not result in an unreasonable risk to the health of consumers.

(2) Variances.

(a) MCL.

(i) The board may grant a MCL variance to a public water system that cannot meet the MCL requirements because of characteristics of the source water that is reasonably available to the system.

(ii) A MCL variance may only be granted after the system has applied the best available technology (BAT), treat-

ment techniques, or other means as identified by the environmental protection agency (EPA) and still cannot meet an MCL standard as specified in section 1415, Public Law 93-523 (federal Safe Drinking Water Act) as amended by Public Law 99-339 (SDWA amendments of 1986), and Public Law 104-182 (SDWA amendments of 1996), as codified at 42 USC 300g-4.

(iii) A variance shall not be granted from the MCL for presence of total coliform under WAC 246-290-310(2).

(b) Treatment techniques.

(i) The board may grant a treatment technique variance to a public water system if the system demonstrates that the treatment technique is not necessary to protect the health of consumers because of the nature of the system's source water.

(ii) A variance shall not be granted from any treatment technique requirement under Part 6 of chapter 246-290 WAC.

(c) The board shall condition the granting of a variance upon a compliance schedule as described in subsection (6) of this section.

(3) Exemptions.

(a) The board may grant a MCL or treatment technique exemption to a public water system that cannot meet an MCL standard or provide the required treatment in a timely manner, or both, as specified under section 1416, Public Law 93-523 (federal Safe Drinking Water Act) as amended by Public Law 99-339 (SDWA amendments of 1986), and Public Law 104-182 (SDWA amendments of 1996), as codified at 42 USC 300g-4.

(b) An exemption may be granted for up to one year if the system was:

(i) In operation on the effective date of the MCL or treatment technique requirement; or

(ii) Not in operation on the effective date, and no reasonable alternative source of drinking water is available.

(c) No exemption shall be granted from:

(i) The requirement to provide a residual disinfectant concentration in the water entering the distribution system under WAC 246-290-662 or 246-290-692; or

(ii) The MCL for presence of total coliform under WAC 246-290-310(2).

(d) The board shall condition the granting of an exemption upon a compliance schedule as described in subsection (6) of this section.

(4) Waivers. The board may grant a waiver to a public water system if the system cannot meet the requirements of these regulations pertaining to any subject not covered by EPA regulations.

(5) Procedures.

(a) For variances and exemptions. The board shall consider granting a variance or exemption to a public water system upon completion of the following actions:

(i) The purveyor applies in writing to the department. The application, which may be in the form of a letter, shall clearly state the reason for the request and what actions the purveyor has taken to meet the requirement;

(ii) The purveyor provides notice of the purveyor's application to consumers and provides proof of such notice to the department;

(iii) The department prepares recommendations, including a compliance schedule for the board's consideration;

(iv) The board provides notice for and conducts a public hearing on the purveyor's request; and

(v) EPA reviews any variance or exemption granted by the board for concurrence, revocation, or revision as provided under sections 1415 and 1416 of Public Law 93-523 (federal Safe Drinking Water Act), as amended, codified at 42 USC 300g-4.

(b) For waivers. The board shall consider granting a waiver upon completion of the following actions:

(i) The purveyor applies to the department in writing. The application, which may be in the form of a letter, shall clearly state the reason for the request;

(ii) The purveyor provides notice of the purveyor's application to consumers and provides proof of such notice to the department;

(iii) The department prepares a recommendation to the board; and

(iv) The board provides notice for and conducts a public hearing on the purveyor's request.

(6) Compliance schedule.

(a) The board shall condition the granting of a variance or exemption based on a compliance schedule. The compliance schedule shall include:

(i) Actions the purveyor shall undertake to comply with a MCL or treatment technique requirement within a specified time period; and

(ii) A description and time-table for implementation of interim control measures the department may require while the purveyor completes the actions required in (a)(i) of this subsection.

(b) The purveyor shall complete the required actions in the compliance schedule within the stated time frame.

(7) Extensions to exemptions.

(a) The board may extend the final date of compliance prescribed in the compliance schedule for a period of up to three years after the date the exemption was granted upon a finding that the water system:

(i) Cannot meet the MCL or treatment technique requirements without capital improvements that cannot be completed within the original exemption period;

(ii) Has entered into an agreement to obtain needed financial assistance for necessary improvements; or

(iii) Has entered into an enforceable agreement to become part of a regional public water system and the system is taking all practicable steps to meet the MCL.

(b) The board may extend the final date of compliance prescribed in the compliance schedule of an exemption for one or more additional two-year periods if the purveyor:

(i) Is a community water system providing water to less than five hundred service connections;

(ii) Needs financial assistance for the necessary improvements; and

(iii) Is taking all practicable steps to meet the compliance schedule.

(c) Procedures listed in subsection (5) of this section shall be followed in the granting of extensions to exemptions.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-060, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, §

246-290-060, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-060, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-060, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-055, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-055, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-055, filed 9/8/83.]

PART 2.

PLANNING AND ENGINEERING DOCUMENTS

WAC 246-290-100 Water system plan. (1) The purpose of this section is to establish a uniform process for purveyors to:

(a) Demonstrate the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with relevant local, state, and federal plans and regulations;

(b) Demonstrate how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans;

(c) Establish eligibility for funding pursuant to the drinking water state revolving fund.

(2) Purveyors of the following categories of community public water systems shall submit a water system plan for review and approval by the department:

(a) Systems having one thousand or more services;

(b) Systems required to develop water system plans under the Public Water System Coordination Act of 1977 (chapter 70.116 RCW);

(c) Any system experiencing problems related to planning, operation, and/or management as determined by the department;

(d) All new systems;

(e) Any expanding system; and

(f) Any system proposing to use the document submittal exception process in WAC 246-290-125.

(3) The purveyor shall work with the department and other parties to establish the level of detail for a water system plan. In general, the scope and detail of the plan will be related to size, complexity, past performance, and use of the water system. Project reports may be combined with a water system plan.

(4) In order to demonstrate system capacity, the water system plan shall address the following elements, as a minimum, for a period of at least twenty years into the future:

(a) Description of the water system, including:

(i) Ownership and management, including the current names, addresses, and telephone numbers of the owners, operators, and emergency contact persons for the system;

(ii) System history and background;

(iii) Related plans, such as coordinated water system plans, abbreviated coordinated water system plans, local land use plans, ground water management plans, and basin plans;

(iv) Service area map, characteristics, agreements, and policies; and

(v) Satellite management, if applicable.

(b) Basic planning data, including:

(i) Current population, service connections, water use, and equivalent residential units; and

(ii) Projected land use, future population, and water demand for a consecutive six-year and final twenty-year planning period within the system's service area.

(c) System analysis, including:

(i) System design standards;

(ii) Water quality analysis;

(iii) System inventory description and analysis; and

(iv) Summary of system deficiencies.

(d) Water resource analysis, including:

(i) Development and implementation of a cost-effective conservation program, which includes evaluation of conservation-oriented water rate structures;

(ii) Water demand forecasts;

(iii) Water use data collection;

(iv) Source of supply analysis, which includes an evaluation of water supply alternatives if additional water rights will be pursued within twenty years;

(v) Water shortage response plan if a water system experiences a water shortage, or anticipates it will experience a water shortage within the next six-year planning period;

(vi) Water right assessment;

(vii) Water supply reliability analysis; and

(viii) Interties.

(e) Source water protection in accordance with WAC 246-290-135.

(f) Operation and maintenance program in accordance with WAC 246-290-415 and 246-290-654(5), as applicable.

(g) Improvement program, including a six-year capital improvement schedule.

(h) Financial program, including demonstration of financial viability by providing:

(i) A summary of past income and expenses;

(ii) A one-year balanced operational budget for systems serving one thousand or more connections or a six-year balanced operational budget for systems serving less than one thousand connections;

(iii) A plan for collecting the revenue necessary to maintain cash flow stability and to fund the capital improvement program and emergency improvements; and

(iv) A rate structure that has considered:

(A) The affordability of water rates; and

(B) The feasibility of adopting and implementing a rate structure that encourages water conservation.

(i) Other documents, such as:

(i) Documentation of SEPA compliance;

(ii) Agreements; and

(iii) Comments from the county and adjacent utilities.

(5) Purveyors intending to implement the project report and construction document submittal exceptions authorized under WAC 246-290-125 must include:

(a) Standard construction specifications for distribution mains; and/or

(b) Design and construction standards for distribution-related projects, including:

(i) Description of project report and construction document internal review procedures, including engineering design review and construction completion reporting requirements;

(ii) Construction-related policies and requirements for external parties, including consumers and developers;

(iii) Performance and sizing criteria; and

(iv) General reference to construction materials and methods.

(6) The department, at its discretion, may require reports from purveyors identifying the progress in developing their water system plans.

(7) Purveyors shall transmit water system plans to adjacent utilities and local governments having jurisdiction, to assess consistency with ongoing and adopted planning efforts.

(8) For community systems, the purveyor shall hold an informational meeting for system consumers prior to departmental approval of a water system plan or a water system plan update. The purveyor shall notify consumers in a way that is appropriate to the size of the system.

(9) Department approval of a water system plan shall be in effect for six years from the date of written approval unless:

(a) Major projects subject to SEPA as defined in WAC 246-03-030 (3)(a) are proposed that are not addressed in the plan;

(b) Changes occur in the basic planning data significantly affecting system improvements identified; or

(c) The department requests an updated plan or plan amendment.

(10) The purveyor shall update the plan and submit it for approval at least every six years. If the system no longer meets the conditions of subsection (2) of this section, the purveyor shall as directed by the department, submit either a plan amendment the scope of which will be determined by the department, or a small water system management program under WAC 246-290-105.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-100, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-100, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-100, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-065, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-065, filed 9/8/83.]

WAC 246-290-105 Small water system management program. (1) The purpose of a small water system management program is to:

(a) Demonstrate the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with all relevant local, state, and federal plans and regulations; and

(b) Establish eligibility for funding pursuant to the drinking water state revolving fund.

(2) All noncommunity and all community systems not required to complete a water system plan as described under WAC 246-290-100(2) shall develop and implement a small water system management program.

(3) The purveyor shall submit this program for review and approval to the department when:

(a) A new NTNC public water system is created; or

(b) An existing system has operational, technical, managerial, or financial problems, as determined by the department.

(4) Content and detail shall be consistent with the size, complexity, past performance, and use of the public water system. General content topics shall include, but not be limited to, the following elements:

- (a) System management;
- (b) Annual operating permit;
- (c) Water facilities inventory form;
- (d) Service area and facility map;
- (e) Documentation of water rights, through a water right assessment;
- (f) Record of source water pumped;
- (g) Water usage;
- (h) Water conservation program;
- (i) Source protection;
- (j) Component inventory and assessment;
- (k) List of planned system improvements;
- (l) Water quality monitoring program;
- (m) Operation and maintenance program;
- (n) Cross-connection control program;
- (o) Emergency response plan; and
- (p) Budget.

(5) The department may require changes be made to a small water system management program if necessary to effectively accomplish the program's purpose.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-105, filed 3/9/99, effective 4/9/99.]

WAC 246-290-110 Project report. (1) The project report is a written document that describes why a project is being proposed and includes engineering design calculations showing how the project will meet its objectives.

(2) The purveyor shall submit project reports to the department and receive written approval prior to installation or construction of any new water system, water system extension, or improvement. The department may require the submittal of a project report for the purpose of resolving a system operational problem. Exceptions to this requirement are listed in WAC 246-290-125.

(3) Project reports submitted for approval by purveyors who are required to have a water system plan will not be considered for approval unless a current, approved water system plan that adequately addresses the project is on file with the department. In the event that a purveyor of an existing system does not have such a plan, the department may enter into a compliance agreement with the purveyor that grants a time extension to complete the water system plan.

(4) Project reports shall be consistent with the standards identified in Part 3 of this chapter. Depending on the complexity and type of project or problem, shall include the following elements (information contained in a current water system plan or other engineering document previously approved by the department need not be duplicated, but must be specifically referenced):

(a) Project description, including:

(i) Why the project is being proposed, how problem(s) (if any) are to be addressed, and the relationship of the project to other system components;

(ii) A statement of State Environmental Policy Action (SEPA) determination of nonsignificance or justification of why SEPA does not apply to project;

(iii) If applicable, source development information (refer to WAC 246-290-130, Source approval, WAC 246-290-132, Interties, and WAC 246-290-135, Source protection);

(iv) If applicable, type of treatment (refer to WAC 246-290-250, Water treatment and Part 6, Surface water treatment); and

(v) A summary of consumer and user complaints.

(b) Planning data. If a purveyor has a water system plan or small water system management program, the project report shall indicate the proposed project's relationship to the plan. If the purveyor is not required by WAC 246-290-100 to have a water system plan, planning related information shall include:

(i) General project background with population and water demand forecasts;

(ii) How the project will impact neighboring water systems;

(iii) Local requirements, such as fire flow;

(iv) Additional management responsibilities in accordance with WAC 246-290-105, Small water system management program, WAC 246-290-415, Operations and maintenance, and chapter 246-292 WAC, Waterworks operator certification regulations;

(v) Implementation strategies or proposed construction schedule;

(vi) Estimated capital and annual operating cost, and method of financing, if applicable.

(c) An analysis of alternatives, including description of options and rationale for selecting the proposed option.

(d) A review of water quality as it relates to the purpose of the proposed project. If a project involves treatment and/or a filtration facility pilot study, refer to departmental guidance, reporting requirements for corrosion control under 40 CFR 141.90, and tracer studies under WAC 246-290-636(5).

(e) When the project involves a new source or an increase in system physical capacity, a review of water quantity, including a water rights assessment, unless such an assessment has previously been submitted in a water system plan or small water system management program that has been approved by the department. The purveyor shall take any follow-up action as directed by the department, to determine conformance with applicable state water rights laws.

(f) Engineering calculations including sizing justification, hydraulic analysis, physical capacity analysis, and other relevant technical considerations necessary to support the project.

(g) Design and construction standards, including performance standards, construction materials and methods, and sizing criteria, if applicable.

(h) Project reports for the design of treatment facilities shall include the following:

(i) Detailed design criteria and calculations to support the proposed treatment processes, process control, and process utilities; and

(ii) Proposed methods and schedules for start-up, testing, and operation of the completed treatment facility.

(i) Legal considerations, such as ownership, right-of-way, sanitary control area (SCA), restrictive covenants, restrictions related to water use that are recorded on titles or

deeds to properties, and relationship with the boundary review board and the utilities and transportation commission (UTC).

(j) Other necessary department-determined considerations.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-110, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-110, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-110, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-110, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-086, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-086, filed 2/17/88.]

WAC 246-290-120 Construction documents. (1) Construction documents shall identify how specific projects will be constructed while satisfying the requirements and conditions established in the project report and/or the water system plan.

(2) Purveyors shall submit construction documents to the department for written approval prior to installation of any new water system, or water system extension or improvement. Exceptions to this requirement are listed in WAC 246-290-125.

(3) Construction documents submitted for approval by purveyors who are required to have a water system plan will not be considered for approval unless a current, approved water system plan that adequately addresses the project is on file with the department. In the event that a purveyor of an existing system does not have such a plan, the department may enter into a compliance agreement with the purveyor that grants a time extension to complete the water system plan.

(4) Construction documents shall be consistent with the standards identified in Part 3 of this chapter and shall include, at a minimum, the following:

(a) Drawings. Include detailed drawings of each project component;

(b) Material specifications. List detailed material specifications for each project component;

(c) Construction specifications.

(i) List detailed construction specifications and assembly techniques for carrying out the project;

(ii) Testing. Identify testing criteria and procedures for each applicable portion of the project;

(iii) Disinfection. Identify specific disinfection procedures that shall conform with American Water Works Association (AWWA) standards or other standards acceptable to the department;

(iv) Inspection. Identify provisions for inspection of the installation of each project component. See WAC 246-290-040 and subsection (5) of this section for construction reporting requirements;

(d) Change orders. All significant changes shall be submitted to and approved by the department in writing. The change order must identify who will be responsible for obtaining departmental approval and how change orders will be reported to the department. Significant means a change in materials used, deviations from original intent of project, or changes made to the physical capacity of the project;

(2003 Ed.)

(e) Record drawings. Record drawings provided to the purveyor following the completion of the project shall be maintained and available to the department upon request.

(5) Purveyors shall submit a construction completion report (departmental form) to the department within sixty days of completion and before use of distribution-related projects in accordance with WAC 246-290-125 (3)(f), or other project approved for construction by the department. Exceptions to this requirement are projects listed in WAC 246-290-125(1). The form shall:

(a) Bear the seal, date, and signature of a professional engineer licensed in the state of Washington;

(b) State the project is constructed and is completed in accordance with department regulations and principles of standard engineering practice, including physical testing procedures, water quality tests, and disinfection practices; and

(c) Document system physical capacity to serve consumers if the project results in a change (increase or decrease) in physical capacity.

(6) The purveyor shall submit a new or updated water facilities inventory (WFI) form (departmental form) with the construction completion report (departmental form) for a new water system, whenever there are changes or additions to an existing water system that would change information of the WFI, or when required by the department.

(7) If the project results in an increase in the water system's physical capacity, the purveyor shall submit a water right assessment, unless such an assessment has previously been submitted in a project report, water system plan, or small water system management program, that has been approved by the department. The purveyor shall take any follow-up action, as directed by the department, to determine conformance with applicable state water rights laws.

(8) Approval of construction documents shall be in effect for two years unless the department determines a need to withdraw the approval. An extension of the approval may be obtained by submitting a status report and a written schedule for completion. Extensions may be subject to additional terms and conditions imposed by the department.

(9) The purveyor shall fulfill the requirements of this section before the use of any completed project.

(10) Purveyors of new water systems must meet the ownership requirements of WAC 246-290-035 and the water system planning requirements of WAC 246-290-100 or 246-290-105 before the department will review and approve the purveyors' construction documents.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-120, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-120, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-096, filed 2/17/88.]

WAC 246-290-125 Project report and construction document submittal exceptions. (1) The following projects do not require project reports in accordance with WAC 246-290-110 and construction documents in accordance with WAC 246-290-120 to be submitted to the department for review and approval prior to installation:

(a) Installation of valves, fittings, and meters, including backflow prevention assemblies;

[Title 246 WAC—p. 565]

(b) Installation of hydrants in accordance with WAC 246-290-230 (3) and (6);

(c) Repair of a system component or replacement with a component of a similar capacity and material in accordance with the original construction specifications of the approved design; or

(d) Maintenance or painting of surfaces not contacting potable water.

(2) Purveyors may elect to not submit to the department for review and approval project reports in accordance with WAC 246-290-110 and construction documents in accordance with WAC 246-290-120 for new distribution mains providing:

(a) The purveyor water system has on file with the department a current department-approved water system plan that includes standard construction specifications for distribution mains; and

(b) The purveyor maintains on file a completed construction completion report (departmental form) in accordance with WAC 246-290-120(5) and makes it available for review upon request by the department.

(3) Purveyors may elect to not submit to the department for review and approval project reports in accordance with WAC 246-290-110 and construction documents in accordance with WAC 246-290-120 for review and approval of other distribution-related projects as defined in WAC 246-290-010 providing:

(a) The purveyor has on file with the department a current department-approved water system plan, in accordance with WAC 246-290-100(5);

(b) The purveyor submits a written request with a new water system plan or an amendment to a water system plan, and updates the request with each water system plan update. The written request should specifically identify the types of projects or facilities for which the submittal exception procedure is requested;

(c) The purveyor has documented that they have employed or hired under contract the services of a professional engineer licensed in the state of Washington to review distribution-related projects not submitted to the department for review and approval. The review engineer and design engineer shall not be the same individual. The purveyor shall provide written notification to the department whenever they proposed to change their designated review engineer;

(d) If the project is a new transmission main, storage tank, or booster pump station, it must be identified in the capital improvement program of the utility's water system plan. If not, either the project report must be submitted to the department for review and approval, or the water system plan must be amended;

(e) A project summary file is maintained by the purveyor for each project and made available for review upon request by the department, and includes:

- (i) Descriptive project summary;
- (ii) Anticipated completion schedule;
- (iii) Consistency with utility's water system plan;
- (iv) Water right assessment, where applicable;
- (v) Change in system physical capacity;
- (vi) Copies of original design and record drawings;

(vii) Engineering design review report (departmental form). The form shall:

(A) Bear the seal, date, and signature of a professional engineer licensed in the state of Washington prior to the start of construction;

(B) Provide a descriptive reference to completed project report and/or construction documents reviewed, including date of design engineer's seal and signature; and

(C) State the project report and/or construction documents have been reviewed, and the design is in accordance with department regulations and principles of standard engineering practice;

(f) The construction completion report is submitted to the department in accordance with WAC 246-290-120(5) for new storage tanks and booster pump stations, and maintained on file with the water system for all other distribution-related projects;

(g) A WFI is completed in accordance with WAC 246-290-120(6); and

(h) The purveyor meets the requirements of chapter 246-294 WAC to have a category "green" operating permit.

(4) Source of supply (including interties) and water quality treatment-related projects shall not be eligible for the submittal exception procedure.

(5) Purveyors not required to prepare a water system plan under WAC 246-290-100 shall be eligible for the submittal exception procedure provided that:

(a) They have a department-approved water system plan meeting the requirements of WAC 246-290-100; and

(b) They comply with all other requirements in this section.

(6) Purveyors shall ensure that all work required to be prepared under the direction of a professional engineer be accomplished per WAC 246-290-040 and chapter 18.43 RCW.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-125, filed 3/9/99, effective 4/9/99.]

WAC 246-290-130 Source approval. (1) Every purveyor shall obtain drinking water from the highest quality source feasible. No new source, previously unapproved source, or modification of an existing source shall be used as a public water supply without department approval. No intake or other connection shall be maintained between a public water system and a source of water not approved by the department.

(2) Before initiating source development or modification, the purveyor shall contact the department to identify submittal requirements.

(3) Any party seeking source approval shall provide the department sufficient documentation, in a project report, construction documents, or in supplemental documents, that the source:

(a) Is reasonable and feasible for the type and size of the system;

(b) May legally be used in conformance with state water rights laws;

(c) Supplies water that is physically and reliably available in the necessary quantities, as shown in:

(i) A hydrogeologic assessment of the proposed source;

(ii) A general description of the watershed, spring, and/or aquifer recharge area affecting the quantity or quality of flow, which includes seasonal variation and upstream water uses that may significantly affect the proposed source;

(iii) For ground water and spring sources, well source development data that are available from a pump test at the maximum design rate and duration, or are available from other sources of information, that establish pump settings (depth) in the well and demonstrate adequacy of water quantity to meet design criteria while not leading to water quality problems;

(iv) For ground water and spring sources, installation of a source meter or other equivalent device that reliably measures volume of flow into the system;

(d) Is, or is not, a GWI under WAC 246-290-640, and meets or can meet the applicable requirements for GWI sources as described in that section including treatment;

(e) Adequately provides for source protection, as shown in:

(i) For surface water and GWI sources, the watershed control program identified under WAC 246-290-135 and Part 6 of this chapter;

(ii) For wells, a preliminary department susceptibility assessment or equivalent information, and preliminary WHPA delineation and contaminant inventory, under the requirements for sanitary control and wellhead protection under WAC 246-290-135;

(f) Is designed and constructed in conformance with this chapter, and relevant requirements of chapter 173-160 WAC (department of ecology well construction standards);

(g) Meets water quality standards under WAC 246-290-310, as shown in an initial water quality analysis that includes, at a minimum, the following:

(i) Bacteriological;

(ii) Complete inorganic chemical and physical;

(iii) Complete VOC;

(iv) Radionuclides, if source approval is requested for a community system;

(v) SOC, except where waived or not required under WAC 246-290-310; and

(vi) Any other information required by the department relevant to the circumstances of the particular source.

Sources that otherwise would not meet water quality standards may be approved if treatment is provided.

(4) The required documentation under subsection (3) of this section shall include, at a minimum:

(a) A copy of the water right, or other written evidence of the existence of the right;

(b) A map showing the project location and vicinity;

(c) A map depicting topography, distances to the surface water intake, well or spring from existing property lines, buildings, potential sources of contamination, ditches, drainage patterns, and any other natural or man-made features affecting the quality or quantity of water;

(d) The dimensions, location, and legal documentation of the sanitary control area (SCA) under WAC 246-290-135;

(e) A copy of the on-site inspection form completed by the department or local health department representative;

(f) A copy of the water well report including the unique well identification tag number, depth to open interval or top

of screened interval, overall depth of well from the top of the casing, vertical elevation, and location (both plat location and latitude/longitude); and

(g) Documentation of source meter installation. The purveyor may utilize other documents, such as a water system plan, susceptibility assessment, wellhead protection program, project report, or construction documents, to provide such documentation and information to the department, provided that such documents are current, and the purveyor indicates the location in the document of the relevant information.

(5) If treatment of a source is necessary to meet water quality standards, the purveyor may be required to meet the provisions of WAC 246-290-250 and Part 6 of this chapter, if applicable, prior to or as a condition of approval.

(6) An intertie must be adequately described in a written agreement between the purveyor and the supplier of the water, and otherwise meet the requirements of WAC 246-290-132.

(7) The purveyor shall not construct facilities for source development and use without prior approval of the department pursuant to the provisions of WAC 246-290-120.

(8) The purveyor shall receive a written source approval when:

(a) The purveyor has complied with the relevant provisions of subsections (1) through (7) of this section; and

(b) The developed source provides water complying with this chapter.

(9) The purveyor may receive a conditional source approval, such as one that sets limits on use or requires interim treatment, if further analysis of the quality of the source is required before final approval.

(10) For sources or supplies of water used by bottled water or ice plants to produce bottled water or ice:

(a) If the bottled water or ice plant is a Group A community water system and the plant uses the system's source for the water that is bottled or made into ice, the source and supply used for the bottled water and ice shall meet the applicable Group A requirements;

(b) If the bottled water or ice plant uses its own source for the water that is bottled or made into ice, and the plant is not a Group A community water system, the owner or operator shall obtain source approval from the department, and the source water shall meet the ongoing source water quality monitoring requirements for a Group A community system;

(c) If the bottled water or ice plant purchases the water for bottling or making ice from another source or supply, the water shall meet the minimum requirements for a Group A community water system, and the owner or operator of the plant shall ensure that the water meets such requirements;

(d) The source or supply for the water that is bottled or made into ice shall be protected from contamination prior to the bottling or ice making process; and

(e) In addition to the requirements imposed under this subsection, the processing of bottled water shall be subject to regulation by the state department of agriculture and the United States Food and Drug Administration.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-130, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-130, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), §

246-290-130, filed 3/25/93, effective 4/25/93. Statutory Authority: Chapter 43.20 RCW. 91-07-031 (Order 150B), § 246-290-130, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-130, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-097, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-097, filed 2/17/88.]

WAC 246-290-132 Interties. (1) No interties shall be used and/or constructed as a public water supply without department approval.

(2) Interties shall not be eligible for submittal exceptions pursuant to WAC 246-290-125.

(3) Prior to department approval, purveyors proposing nonemergency interties shall ensure that the intertie is addressed:

(a) In an approved coordinated water system plan, water system plan, water system plan update, water system plan amendment, or small water system management program including:

- (i) Location of the proposed intertie;
- (ii) Date it is proposed to be utilized;
- (iii) The purpose, physical capacity, service area, and proposed usage of the intertie;
- (iv) Copy of the intertie agreement between purveyors;
- (v) Description of how the intertie:
 - (A) Improves overall system reliability;
 - (B) Enhances the manageability of the system;
 - (C) Provides opportunities for conjunctive use; or
 - (D) Delays or avoids the need to develop new water sources;

(vi) Identification of any potential public health or safety concerns;

(vii) Discussion of any water quality and treatment issues;

(viii) Demonstration of the source capacity and hydraulic capacity of the supplying and receiving systems at the designed flow rate through the intertie;

(ix) Water right assessment;

(x) Identification of alternative sources that will be utilized when the intertie agreement expires if the water is not being provided in perpetuity; and

(xi) Identification and comparison of alternatives if any.

(b) In construction documents in accordance with WAC 246-290-120 including:

(i) Demonstration of the installation of a source meter to measure water exchanged; and

(ii) Water right assessment, if not previously provided to the department. Where RCW 90.03.383 requires a water right or water right change to be issued by the department of ecology, construction work on the intertie shall not begin, notwithstanding any prior approval of the intertie by the department in a water system plan, until the department of ecology issues the required water right document.

(4) Emergency use interties are interconnections between public water systems permitting the temporary exchange or delivery of water between those systems only in cases of emergency that result in permanent supplies being unavailable for use. Prior to department approval, purveyors proposing emergency use interties shall ensure that the emergency intertie is addressed:

(a) In an approved coordinated water system plan, water system plan, water system plan update, water system plan amendment, or small water system management plan including:

(i) Description of the intended use of the emergency intertie;

(ii) Location of the proposed intertie;

(iii) Date the intertie is intended to be operational;

(iv) Copy of the intertie agreement between purveyors detailing the conditions and limitations of such intertie; and

(v) Hydraulic analysis conducted to identify the impacts upon each water system.

(b) In a project report in accordance with WAC 246-290-110 or in a construction document in accordance with WAC 246-290-120.

(5) Purveyors proposing interties shall apply to the department of ecology for water right changes as provided in RCW 90.03.383. Except as provided in RCW 90.03.383(7) and 90.03.390, no interties may be constructed without department of ecology action on the proposed change.

(6) The purveyor may be required to have emergency interties approved as nonemergency interties where such interties are used frequently or on a long-term basis. If the department makes such a determination, the intertie will require approval in accordance with subsection (3) of this section.

(7) Intertie agreements between purveyors shall include:

(a) Identification of specific time periods in which water will be provided;

(b) Identification of the volume of water available for use, including any seasonal or other restrictions; and

(c) Identification of how water conservation programs, data collection, water demand forecasting, and other operational matters will be coordinated.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-132, filed 3/9/99, effective 4/9/99.]

WAC 246-290-135 Source water protection. (1) The department may require monitoring and controls in addition to those specified in this section if, in the opinion of the department, a potential risk exists to the water quality of a source.

(2) Sanitary control area (SCA).

(a) The purveyor shall maintain an SCA around all sources for the purpose of protecting them from existing and potential sources of contamination.

(b) For wells and springs, the minimum SCA shall have a radius of one hundred feet (thirty meters) and two hundred feet (sixty meters) respectively, unless engineering justification demonstrates that a smaller area can provide an adequate level of source water protection. The justification shall address geological and hydrological data, well construction details, mitigation measures, and other relevant factors necessary to assure adequate sanitary control.

(c) The department may require a larger SCA than specified in (b) of this subsection, or additional mitigation measures if land use, geological, and/or hydrological data support such a decision. It shall be the purveyor's responsibility to obtain the protection needed.

(d) No source of contamination may be constructed, stored, disposed of, or applied within the SCA without the permission of the department and the purveyor.

(e) The SCA shall be owned by the purveyor in fee simple, or the purveyor shall have the right to exercise complete sanitary control of the land through other legal provisions.

(f) A purveyor, owning all or part of the SCA in fee simple or having possession and control, shall send to the department copies of legal documentation, such as a duly recorded declaration of covenant, restricting the use of the land. This legal documentation shall state:

(i) No source of contamination may be constructed, stored, disposed of, or applied without the permission of the department and the purveyor; and

(ii) If any change in ownership of the system or SCA is considered, all affected parties shall be informed of these requirements.

(g) Where portions of the control area are in the possession and control of another, the purveyor shall obtain a duly recorded restrictive covenant which shall run with the land, restricting the use of said land in accordance with this chapter and provide the department with copies of the appropriate documentation.

(3) Wellhead protection.

(a) Purveyors of water systems using ground water or spring sources shall develop and implement a wellhead protection program.

(b) The wellhead protection program shall be part of the water system plan required under WAC 246-290-100 or the small water system management program required under WAC 246-290-105.

(c) The purveyor's wellhead protection program shall contain, at a minimum, the following elements:

(i) A completed susceptibility assessment or equivalent information;

(ii) Wellhead protection area (WHPA) delineation for each well, wellfield, or spring with the six month, one, five and ten year time of travel boundaries marked, or boundaries established using alternate criteria approved by the department in those settings where ground water time of travel is not a reasonable delineation criteria. WHPA delineations shall be done in accordance with recognized methods such as those described in the following sources:

(A) Department guidance on wellhead protection; or

(B) EPA guidance for delineation of wellhead protection areas;

(iii) An inventory, including identification of site locations and owners/operators, of all known and potential ground water contamination sources located within the defined WHPA(s) having the potential to contaminate the source water of the well(s) or spring(s). This list shall be updated every two years;

(iv) Documentation of purveyor's notification to all owners/operators of known or potential sources of ground water contamination listed in (c)(B)(iii) of this subsection;

(v) Documentation of purveyor's notification to regulatory agencies and local governments of the boundaries of the WHPA(s) and the findings of the WHPA inventory;

(vi) A contingency plan to ensure consumers have an adequate supply of potable water in the event that contamina-

tion results in the temporary or permanent loss of the principal source of supply (major well(s) or wellfield); and

(vii) Documentation of coordination with local emergency incident responders (including police, fire and health departments), including notification of WHPA boundaries, results of susceptibility assessment, inventory findings, and contingency plan.

(4) Watershed control program.

(a) Purveyors of water systems using surface water or GWI sources shall develop and implement a watershed control program in accordance with Part 6 of chapter 246-290 WAC as applicable.

(b) The watershed control program shall be part of the water system plan required in WAC 246-290-100 or the small water system management program required in WAC 246-290-105.

(c) The purveyor's watershed control program shall contain, at a minimum, the following elements:

(i) Watershed description and inventory, including location, hydrology, land ownership and activities that may adversely affect source water quality;

(ii) An inventory of all potential surface water contamination sources and activities, including identification of site locations and owner/operators, located within the watershed and having the significant potential to contaminate the source water quality;

(iii) Watershed control measures, including documentation of ownership and relevant written agreements, and monitoring of activities and water quality;

(iv) System operation, including emergency provisions; and

(v) Documentation of water quality trends.

(d) The purveyor shall submit the watershed control program to the department for approval. Following departmental approval, the purveyor shall implement the watershed control program as approved.

(e) Purveyors of systems using unfiltered surface or GWI sources and meeting the criteria to remain unfiltered as specified in WAC 246-290-690 shall submit an annual report to the department that summarizes the effectiveness of the watershed control program. Refer to WAC 246-290-690 for further information about this report.

(f) The purveyor shall update the watershed control program at least every six years, or more frequently if required by the department.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-135, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-135, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-135, filed 3/25/93, effective 4/25/93.]

WAC 246-290-140 Existing system as-built approval.

At the discretion of the department, owners of existing systems without approved construction documents shall provide information necessary to establish the extent of the water system's compliance with this chapter. At a minimum, this shall include submission and approval by the department of:

(1) A water system plan or small water system management program;

(2) As-built or record drawings; and

(3) Water quality analyses.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-140, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-140, filed 6/22/94, effective 7/23/94; 91-02-051 (Order 124B), recodified as § 246-290-140, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-098, filed 10/10/89, effective 11/10/89.]

PART 3.

DESIGN OF PUBLIC WATER SYSTEMS

WAC 246-290-200 Design standards. (1) Purveyors shall ensure that good engineering criteria and practices are used in the design and construction of all public water systems, such as those set out in:

(a) Department guidance on design for Group A public water systems;

(b) The most recent published edition of the Uniform Building Code (UBC) or the Uniform Plumbing Code (UPC);

(c) The most recent published edition of *Recommended Standards for Water Works, A Committee Report of the Great Lakes - Upper Mississippi River Board of State Public Health and Environmental Managers*;

(d) Standard specifications of the American Public Works Association (APWA), the American Society of Civil Engineers (ASCE), the American Water Works Association (AWWA), or the American Society for Testing and Materials (ASTM);

(e) Design criteria, such as contained in current college texts and professional journal articles, acceptable to the department;

(f) Chapter 173-160 WAC *Minimum Standards for Construction and Maintenance of Water Wells*;

(g) The latest edition of the PNWS-AWWA Cross-Connection Control Manual, or the University of Southern California (USC) Manual of Cross-Connection Control.

(2) In addition, purveyors of new or expanding public water systems shall consider and use, as appropriate, the following design factors:

(a) Historical water use;

(b) Community versus recreational uses of water;

(c) Local conditions and/or regulations;

(d) Community expectations;

(e) Public Water System Coordination Act considerations where appropriate;

(f) Provisions for systems and component reliability in accordance with WAC 246-290-420;

(g) Wind pressures, seismic risk, snow loads, and flooding;

(h) Other risks from potential disasters, as feasible; and

(i) Other information as required by the department.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-200, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-200, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-200, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-105, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-105, filed 9/8/83.]

WAC 246-290-220 Drinking water materials and additives. (1) All materials shall conform to the ANSI/NSF Standard 61 if in substantial contact with potable water sup-

plies. For the purposes of this section, "substantial contact" means the elevated degree that a material in contact with water may release leachable contaminants into the water such that levels of these contaminants may be unacceptable with respect to either public health or aesthetic concerns. It should take into consideration the total material/water interface area of exposure, volume of water exposed, length of time water is in contact with the material, and level of public health risk. Examples of water system components that would be considered to be in "substantial contact" with drinking water are filter media, storage tank interiors or liners, distribution piping, membranes, exchange or adsorption media, or other similar components that would have high potential for contacting the water. Materials associated with such components as valves, pipe fittings, debris screens, gaskets, or similar appurtenances would not be considered to be in substantial contact.

(2) Materials or additives in use prior to the effective date of these regulations that have not been listed under ANSI/NSF Standard 60 or 61 shall be allowed for their current applications until such time that the materials are scheduled for replacement, or that stocks of existing additives are depleted and scheduled for reorder.

(3) Any treatment chemicals, with the exception of commercially retailed hypochlorite compounds such as unscented Clorox, Purex, etc., added to water intended for potable use shall comply with ANSI/NSF Standard 60. The maximum application dosage recommendation for the product certified by the ANSI/NSF Standard 60 shall not be exceeded in practice.

(4) Any products used to coat, line, seal, patch water contact surfaces or that have substantial water contact within the collection, treatment, or distribution systems shall comply with the appropriate ANSI/NSF Standard 60 or 61. Application of these products shall comply with recommendations contained in the product certification.

(5) The department may accept continued use of, and proposals involving, certain noncertified chemicals or materials on a case-by-case basis, provided all of the following criteria are met:

(a) The chemical or material has an acknowledged and demonstrable history of use in the state for drinking water applications;

(b) There exists no substantial evidence that the use of the chemical or material has caused consumers to register complaints about aesthetic issues, or health related concerns, that could be associated with leachable residues from the material; and

(c) The chemical or material has undergone testing through a protocol acceptable to the department and has been found to not contribute leachable compounds into drinking water at levels that would be of public health concern.

(6) Any pipe, pipe fittings, solder, or flux used in the installation or repair of a public water system shall be lead-free:

(a) This prohibition shall not apply to leaded joints necessary for the repair of cast iron pipes; and

(b) Within the context of this section, lead-free shall mean:

(i) No more than eight percent lead in pipes and pipe fittings; and

(ii) No more than two-tenths of one percent lead in solder and flux.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-220, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-220, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-131, filed 2/17/88.]

WAC 246-290-221 Water demand design criteria. (1)

Except as provided in this section, expanding systems shall use water demand design for average day demand (ADD), and peak periods of demand such as maximum day demand (MDD), and peak hourly demand (PHD) that are based upon actual metered water use records. The data collected shall be sufficient to account for seasonal or other cyclic changes in water demand, and shall correlate to the maximum number of full-time or part-time equivalent residential units in service at any time.

(2) For seasonally used, transitory noncommunity, or recreational developments the design for ADD, MDD, and PHD shall be based upon metered water uses whenever such data is available. The data must account for the daily population using the water over the time that records are collected, and must reflect the uses associated with maximum occupancy for the development. The design demands for these developments apply only to part-time uses, and may not be applied to structures or dwellings that can be permanently occupied.

(3) In the absence of metered use or other comparable information, the following sources of design information may be used:

(a) Comparable metered water use data from analogous water systems. Analogous systems are those with similar characteristics, such as demographics, housing sizes, income levels, lot sizes, climate, water pricing structure, conservation practices, use restrictions, and soils and landscaping; or

(b) Design criteria or guidelines in the most recent edition of the department manual for design of Group A public water systems.

(4) The design for water systems based upon metered water use records shall have an MDD no lower than three hundred fifty gallons per day per equivalent residential unit (ERU), except for the design of any expansion to an existing water system that has a minimum of two years of meter records that clearly demonstrate that a lower design value for MDD may be used without significant risk of pressure loss. The meter records must correlate the demand data to the actual level of occupancy for the periods covered by the records.

(5) The minimum water demand and duration required for fire flow and/or fire suppression storage shall be determined by the local fire control authority, or chapter 246-293 WAC for systems within the boundaries of a designated critical water supply service area (CWSSA). Public water systems that are not required to comply with minimum fire flow standards shall coordinate with the local fire control authorities to ensure that any hydrants on the system, if they can possibly be used in the course of fire suppression activities, do not create adverse pressure problems within the water system as a result of fire control actions.

(2003 Ed.)

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-221, filed 3/9/99, effective 4/9/99.]

WAC 246-290-222 Water system physical capacity.

(1) The water system physical capacity shall be established by evaluating the capacity of each system component such as source, treatment, storage, transmission, or distribution, individually and in combination with each other. The evaluation shall identify any limitations on the ability of the system to provide service to all consumers.

(2) The water system physical capacity shall be:

(a) Reported in terms of total equivalent residential units (ERUs) and the number of residential and nonresidential connections with the number of ERUs they represent; and

(b) Compared to the existing number of residential and nonresidential connections currently served and the ERUs they represent.

(3) Total source capacity calculations shall not include emergency sources as defined in WAC 246-290-010.

(4) Total daily source capacity, in conjunction with any storage that is designed to accommodate peak use periods on a daily or longer basis, shall be sufficient to provide a reliable supply of water equal to or exceeding the MDD.

(5) Treatment capacity, in conjunction with any storage designed to accommodate peak demand periods on a daily or longer basis, shall be sufficient to provide a reliable supply of treated water equal to or exceeding the MDD while meeting the water quality parameters set forth in Part 4 and Part 6 as applicable, of this chapter.

(6) Water storage shall be sufficient to meet expected system service demands by providing sufficient operational, equalizing, standby, and where applicable, fire suppression storage volumes in accordance with WAC 246-290-235.

(7) Distribution system capacity shall provide for PHD, or MDD plus required fire flow, as required in each pressure zone while maintaining minimum design pressures established under this chapter.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-222, filed 3/9/99, effective 4/9/99.]

WAC 246-290-230 Distribution systems. (1) The purveyor shall size and evaluate new, or expansions to existing, distribution systems using a hydraulic analysis acceptable to the department.

(2) The minimum diameter of all distribution mains shall be six inches (150 mm) unless smaller mains can be justified by hydraulic analysis.

(3) Systems designed to provide fire flows shall have a minimum distribution main size of six inches (150 mm).

(4) Installation of new standard fire hydrants shall not be allowed on mains less than six inches (150 mm) in diameter. Existing fire hydrants on currently active mains less than six inches (150 mm) in diameter shall be allowed to remain provided:

(a) The existing distribution system consists of mains at least four inches (101.6 mm) in diameter, and the fire flow available from existing four-inch (101.6 mm) mains within the proximity of the fire hydrant exceeds the minimum fire flow standard adopted by the local fire protection authority; and

[Title 246 WAC—p. 571]

(b) The location and installation of the fire hydrants on the four-inch (101.6 mm) main have received approval by the local fire protection authority.

(5) New public water systems or additions to existing systems shall be designed with the capacity to deliver the design PHD quantity of water at 30 psi (210 kPa) under PHD flow conditions measured at all existing and proposed service water meters or along property lines adjacent to mains if no meter exists, and under the condition where all equalizing storage has been depleted.

(6) If fire flow is to be provided, the distribution system shall also provide maximum day demand (MDD) plus the required fire flow at a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system, and under the condition where the designed volume of fire suppression and equalizing storage has been depleted.

(7) Booster pumps shall be designed in accordance with good engineering criteria and practices as listed in WAC 246-290-200.

(8) On existing systems, or for additions to existing systems, that are unable to meet the pressure requirements of this section, booster pumps for individual services may be used in the interim until system improvements are made to resolve pressure deficiencies. In this situation, the individual booster pumps shall be under the management and control of the purveyor.

(9) Transmission lines as defined in WAC 246-290-010 shall be designed to maintain greater than or equal to five psi (35 kPa) during normal operations, except when directly adjacent to storage tanks, and shall be sized according to a hydraulic analysis. Transmission mains designed to operate at velocities greater than ten feet per second shall include a hydraulic transient (water hammer) analysis in conjunction with the hydraulic analysis.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-230, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-230, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-230, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-230, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-135, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-135, filed 9/8/83.]

WAC 246-290-235 Distribution reservoirs. (1) Distribution reservoirs shall be designed to:

(a) Prevent entry by birds, animals, insects, excessive dust, and other potential sources of external contamination. The design shall include provisions for a lockable weather-tight roof, a screened roof vent, an overflow pipe with atmospheric discharge or other suitable means to prevent a cross-connection, sample collection capability, a drain to daylight (or an approved alternative that is adequate to protect against cross-connection), a provision for tank isolation in order to perform maintenance procedures, and other appurtenances appropriate to the protection of stored water from contamination;

(b) Maintain water circulation, prevent water stagnation, and provide adequate disinfection contact time; and

(c) Be accessible for routine maintenance and water quality monitoring.

[Title 246 WAC—p. 572]

(2) Equalizing storage, as defined in WAC 246-290-010, shall be provided to meet peak periods of demand, either daily or longer, when determined to be necessary based on available, or designed, source pumping capacity.

(3) Operational, standby, and fire suppression storage volumes as defined in WAC 246-290-010 shall be provided, as applicable, for all pressure zones to meet both normal as well as abnormal demands of the system.

(4) Standby and fire suppression storage volumes may be nested with the larger of the two volumes being the minimum available, provided the local fire protection authority does not require them to be additive.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-235, filed 3/9/99, effective 4/9/99.]

WAC 246-290-250 Treatment design. (1) Treatment systems or devices shall be piloted and designed to ensure finished water quality conforms to water quality standards established in WAC 246-290-310.

(2) Treatment systems or devices for surface water or GWI sources shall be designed in accordance with the provisions of Part 6 of this chapter and the applicable provisions herein.

(3) Predesign studies, including pilot studies as appropriate, shall be required for proposed surface water and GWI sources and those ground water sources requiring treatment. The goal of the predesign study shall be to establish the most effective method, considering economics, to produce satisfactory finished water quality meeting the requirements of this chapter and complying with the treatment technique requirements in Part 6 of chapter 246-290 WAC. The predesign study shall be included as part of the project report under WAC 246-290-110. Refer to WAC 246-290-676 for requirements relating specifically to the filtration facility pilot study. The purveyor shall not establish nor maintain a bypass to divert water around any feature of a treatment process, except by written permission of the department.

(4) All well and spring sources not determined to be GWI's shall have continuous disinfection that meets the operational requirements of WAC 246-290-451 (3) and (4). The department may modify the requirement for disinfection for public water systems that demonstrate the well or spring sources (not confirmed as GWI's) have satisfactory bacteriological histories at the source and have SCAs in accordance with WAC 246-290-135.

(5) Purveyors shall use appropriate treatment technologies, such as those outlined in department guidance on water treatment, and shall address water treatment facilities in their water system plans pursuant to WAC 246-290-100.

(6) Project reports for the design of treatment facilities shall meet the requirements of WAC 246-290-110.

(7) Construction specifications for treatment facilities shall meet the requirements of WAC 246-290-120.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-250, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-250, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-250, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-155, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-155, filed 9/8/83.]

(2003 Ed.)

**PART 4.
WATER QUALITY**

WAC 246-290-300 Monitoring requirements. (1) General.

(a) The monitoring requirements specified in this section are minimums. The department may require additional monitoring when:

(i) Contamination is present or suspected in the water system;

(ii) A ground water source is determined to be a potential GWI;

(iii) The degree of source protection is not satisfactory;

(iv) Additional monitoring is needed to verify source vulnerability for a requested monitoring waiver;

(v) Under other circumstances as identified in a departmental order; or

(vi) Additional monitoring is needed to evaluate continuing effectiveness of a treatment process where problems with the treatment process may exist.

(b) Special purpose samples collected by the purveyor shall not count toward fulfillment of the monitoring requirements of this chapter unless the quality of data and method of sampling and analysis are acceptable to the department.

(c) The purveyor shall ensure samples required by this chapter are collected, transported, and submitted for analysis according to department-approved methods. The analyses shall be performed by the state public health laboratory or another laboratory certified by the department. Qualified water utility, certified laboratory, or health department personnel may conduct measurements for pH, temperature, residual disinfectant concentration and turbidity as required by this chapter, provided, these measurements are made in accordance with "standard methods."

(d) Compliance samples required by this chapter shall be taken at locations listed in Table 3 of this section.

(e) Purveyors failing to comply with a monitoring requirement shall notify:

(i) The department in accordance with WAC 246-290-480; and

(ii) The water system users in accordance with WAC 246-290-495.

(2) Selling and receiving water.

(a) Source monitoring. Purveyors, with the exception of those that "wheel" water to their consumers (i.e., sell water that has passed through another purchasing purveyor's distribution system), shall conduct source monitoring in accordance with this chapter for the sources under their control. The level of monitoring shall satisfy the monitoring requirements associated with the total population served by the source.

(b) Distribution system monitoring. The purveyor of a system that receives and distributes water shall perform distribution-related monitoring requirements. Monitoring shall include, but not be limited to, the following:

(i) Collect coliform samples in accordance with subsection (3) of this section;

(ii) Collect trihalomethane samples in accordance with subsection (6) of this section;

(iii) Perform the distribution system residual disinfectant concentration monitoring required under WAC 246-290-451 or 246-290-694;

(iv) Perform lead and copper monitoring required under 40 CFR 141.86, 141.87, and 141.88;

(v) Perform the distribution system monitoring in accordance with 40 CFR 141.23(b) for asbestos if applicable;

(vi) Other monitoring as required by the department.

(c) Reduced monitoring for regional programs. The receiving purveyor may receive reductions in the coliform, lead and copper, THM and distribution system disinfectant residual concentration monitoring requirements, provided the receiving system:

(i) Has a satisfactory water quality history as determined by the department;

(ii) Operates in a satisfactory manner consistent with this chapter;

(iii) Purchases water from a purveyor that has a department-approved regional monitoring program; and

(iv) Has a written agreement with the supplying system or regional water supplier that is acceptable to the department, and which identifies the responsibilities of both the supplying and receiving system(s) with regards to monitoring, reporting and maintenance of the distribution system.

(d) Periodic review of regional programs. The department may periodically review the sampling records of public water systems participating in a department-approved monitoring program to determine if continued reduced monitoring is appropriate. If the department determines a change in the monitoring requirements of the receiving system is appropriate:

(i) The department shall notify the purveyor of the change in monitoring requirements; and

(ii) The purveyor shall conduct monitoring as directed by the department.

(3) Bacteriological.

(a) The purveyor shall be responsible for collection and submittal of coliform samples from representative points throughout the distribution system. Samples shall be collected after the first service and at regular time intervals each month the system provides water to consumers. Samples shall be collected that represent normal system operating conditions.

(i) Systems providing disinfection treatment shall, when taking a routine or repeat sample, measure residual disinfectant concentration within the distribution system at the same time and location and comply with the residual disinfection monitoring requirements under WAC 246-290-451.

(ii) Systems providing disinfection treatment shall assure that disinfectant residual concentrations are measured and recorded on all coliform sample report forms submitted for compliance purposes.

(b) Coliform monitoring plan.

(i) The purveyor shall prepare a written coliform monitoring plan and base routine monitoring upon the plan. The plan shall include coliform sample collection sites and a sampling schedule.

(ii) The purveyor shall:

(A) Keep the coliform monitoring plan on file with the system and make it available to the department for inspection upon request;

(B) Revise or expand the plan at any time the plan no longer ensures representative monitoring of the system, or as directed by the department; and

(C) Submit the plan to the department for review and approval when requested and as part of the water system plan required under WAC 246-290-100.

(c) Monitoring frequency. The number of required routine coliform samples is based on total population served.

(i) Purveyors of **community** systems shall collect and submit for analysis no less than the number of routine samples listed in Table 2 during each calendar month of operation;

(ii) Unless directed otherwise by the department, purveyors of **noncommunity** systems shall collect and submit for analysis no less than the number of samples required in Table 2, and no less than required under 40 CFR 141.21. Each month's population shall be based on the average daily population and shall include all residents and nonresidents served during that month. During months when the average daily population served is less than twenty-five, routine sample collection is not required when:

(A) Using only protected ground water sources;

(B) No coliform were detected in samples during the previous month; and

(C) One routine sample has been collected and submitted for analysis during one of the previous two months.

(iii) Purveyors of systems serving both a resident and a nonresident population shall base their minimum sampling requirement on the total of monthly populations served, both resident and nonresident as determined by the department, but no less than the minimum required in Table 2; and

(iv) Purveyors of systems with a nonresident population lasting two weeks or less during a month shall sample as directed by the department. Sampling shall be initiated at least two weeks prior to the time service is provided to consumers.

(v) Purveyors of TNC systems shall not be required to collect routine samples in months where the population served is zero or the system has notified the department of an unscheduled closure.

(d) Invalid samples. When a coliform sample is determined invalid under WAC 246-290-320 (2)(d), the purveyor shall:

(i) Not include the sample in the determination of monitoring compliance; and

(ii) Take follow-up action as defined in WAC 246-290-320 (2)(d).

(e) The purveyor using a surface water or GWI source shall collect representative source water samples for bacteriological density analysis in accordance with WAC 246-290-664 and 246-290-694 as applicable.

TABLE 2

MINIMUM MONTHLY ROUTINE COLIFORM SAMPLING REQUIREMENTS

Population Served ¹	Minimum Number of Routine Samples/Calendar Month	
	When NO samples with a coliform presence were collected during the previous month	When ANY samples 578 with a coliform presence were collected during the previous month
During Month		
1 - 1,000	1*	5
1,001 - 2,500	2*	5
2,501 - 3,300	3*	5
3,301 - 4,100	4*	5
4,101 - 4,900	5	5
4,901 - 5,800	6	6
5,801 - 6,700	7	7
6,701 - 7,600	8	8
7,601 - 8,500	9	9
8,501 - 12,900	10	10
12,901 - 17,200	15	15
17,201 - 21,500	20	20
21,501 - 25,000	25	25
25,001 - 33,000	30	30
33,001 - 41,000	40	40
41,001 - 50,000	50	50
50,001 - 59,000	60	60
59,001 - 70,000	70	70
70,001 - 83,000	80	80
83,001 - 96,000	90	90
96,001 - 130,000	100	100
130,001 - 220,000	120	120
220,001 - 320,000	150	150
320,001 - 450,000	180	180
450,001 - 600,000	210	210
600,001 - 780,000	240	240
780,001 - 970,000	270	270
970,001 - 1,230,000 ³	300	300

¹ Does not include the population of a consecutive system that purchases water. The sampling requirement for consecutive systems is a separate determination based upon the population of that system.

² Noncommunity systems using only protected ground water sources and serving less than 25 individuals, may collect and submit for analysis, one sample every three months.

³ Systems serving populations larger than 1,230,000 shall contact the department for the minimum number of samples required per month.

* In addition to the provisions of subsection (1)(a) of this section, if a system of this size cannot show evidence of having been subject to a sanitary survey on file with the department, or has been determined to be at risk to bacteriological concerns following a survey, the minimum number of samples required per month may be increased by the department after additional consideration of such factors as monitoring history, compliance record, operational problems, and water quality concerns for the system.

(4) Inorganic chemical and physical.

(a) A complete inorganic chemical and physical analysis shall consist of the primary and secondary chemical and physical substances.

(i) Primary chemical and physical substances are antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate (as N), nitrite (as N), selenium, sodium, thallium, and for unfiltered surface water, turbidity.

(ii) Secondary chemical and physical substances are chloride, color, hardness, iron, manganese, specific conductivity, silver, sulfate, total dissolved solids*, and zinc.

* Required only when specific conductivity exceeds seven hundred micromhos/centimeter.

(b) Purveyors shall monitor for all primary and secondary chemical and physical substances identified in Table 4 and Table 5. Samples shall be collected in accordance with the monitoring requirements referenced in 40 CFR 141.23(a) through 141.23(j) and 40 CFR 143.4, except for composite samples for systems serving less than three thousand three hundred one persons. For these systems, compositing among different systems may be allowed if the systems are owned or operated by a department-approved satellite management agency.

(c) Samples required by this subsection shall be taken at designated locations in accordance with 40 CFR 141.23(a) through 141.23(j), and 40 CFR 143.4, and Table 3 herein.

(i) Wellfield samples shall be allowed from department designated wellfields; and

(ii) In accordance with 40 CFR 141.23 (a)(3), alternate sampling locations may be used if approved by the department. The process for determining these alternate sites is described in department guidance. Purveyors of community and NTNC systems may ask the department to approve an alternate sampling location for multiple sources within a single system that are blended prior to entry to the distribution system. Alternate sampling plans shall address the following:

- (A) Source vulnerability;
- (B) Individual source characteristics;
- (C) Previous water quality information;
- (D) Status of monitoring waiver applications; and
- (E) Other information deemed necessary by the department.

(d) Composite samples:

(i) In accordance with CFR 141.23 (a)(4), purveyors may ask the certified lab to composite samples representing as many as five individual samples from within one system. Sampling procedures and protocols are outlined in department guidance; and

(ii) For systems serving a population of less than three thousand three hundred one, the department may approve composite sampling between systems when those systems are part of an approved satellite management agency.

(e) When the purveyor provides treatment for one or more inorganic chemical or physical contaminants, the department may require the purveyor to sample before and after treatment. The department shall notify the purveyor if and when this additional source sampling is required.

(f) Inorganic monitoring plans.

(i) Purveyors of community and NTNC systems shall prepare an inorganic chemical monitoring plan and base routine monitoring on the plan.

(ii) The purveyor shall:

(A) Keep the monitoring plan on file with the system and make it available to the department for inspection upon request;

(B) Revise or expand the plan at any time the plan no longer reflects the monitoring requirements, procedures or sampling locations, or as directed by the department; and

(C) Submit the plan to the department for review and approval when requested and as part of the water system plan required under WAC 246-290-100.

(g) Monitoring waivers.

(i) Purveyors may request in writing, a monitoring waiver from the department for any nonnitrate/nitrite inorganic chemical and physical monitoring requirements identified in this chapter.

(ii) Purveyors requesting a monitoring waiver shall comply with applicable subsections of 40 CFR 141.23 (b)(3), 141.23 (c)(3), and 141.40 (n)(4).

(iii) Purveyors shall update and resubmit requests for waiver renewals as applicable during each compliance cycle or period or more frequently as directed by the department.

(iv) Failure to provide complete and accurate information in the waiver application shall be grounds for denial of the monitoring waiver.

(h) The department may require the purveyor to repeat sample for confirmation of results.

(i) Purveyors with emergency and seasonal sources shall monitor those sources when they are in use.

(5) Lead and copper. Monitoring for lead and copper shall be conducted in accordance with 40 CFR 141.86, 141.87, and 141.88.

(6) Trihalomethanes (THMs).

(a) Purveyors of **community** systems serving a population of ten thousand or more and providing water treated with chlorine or other halogenated disinfectant shall monitor as follows:

(i) Ground water sources. The purveyor shall collect one sample from each treated ground water source every twelve months. This sample shall be taken at the source before treatment and analyzed for maximum total trihalomethane potential (MTTP). The purveyor may receive approval from the department for an alternate sample location if it would provide essentially the same information as an MTTP analysis regarding the levels of THMs that the consumers are, or could potentially be, exposed to in the drinking water.

(ii) Surface water sources. The purveyor shall collect four samples per treated source every three months. The samples shall be taken within a twenty-four-hour period. The purveyor shall take one of the samples from the extreme end of the distribution system, the farthest point possible from the source of supply, and three samples from representative intermediate locations in the distribution system. The samples shall be analyzed for TTHM (i.e., the sum of trichloromethane, bromodichloromethane, dibromochloromethane, and tribromomethane). After one year of monitoring, the department may reduce the monitoring frequency to one sample every three months per treatment plant if the TTHM levels are less than 0.10 mg/L. The purveyor shall take the sample at the extreme end of the distribution system; or

(iii) Purchased surface water sources. The purveyor of a consecutive system shall collect one water sample per each purchased source originating from a surface supply or confirmed GWI every three months. The sample shall be taken at the extreme end of the distribution system and analyzed for TTHM.

(b) Purveyors of **community** systems shall monitor for TTHM when serving a population less than ten thousand and providing surface water treated with chlorine or other halogenated disinfectant. The purveyor shall collect one water sample per treated source every three months for one year. The sample shall be taken at the extreme end of the distribution

system and analyzed for TTHM. After the first year, the purveyor shall monitor surface water sources every thirty-six months.

(c) Purveyors of **community** systems shall monitor for TTHM when serving less than ten thousand people and purchasing surface water treated with chlorine or other halogenated disinfectant or adding a halogenated disinfectant after purchase. The purveyor shall collect one water sample every three months at the extreme end of the distribution system or at a department-acceptable location. The sample shall be analyzed for TTHM. After the first year, the purveyor shall monitor every thirty-six months.

(7) Organic chemicals.

(a) Purveyors of community and NTNC water systems shall comply with monitoring requirements in accordance with 40 CFR 141.24(a), 141.24(f), 141.24(g), 141.24(h), 141.40(a), 141.40(d), and 141.40(e).

(b) Sampling locations shall be as defined in 40 CFR 141.24(f), 141.24(g), 141.24(h), 141.40(b) and 141.40(c).

(i) Wellfield samples shall be allowed from department designated wellfields; and

(ii) In accordance with 40 CFR 141.24 (f)(3) and 141.24 (h)(3), alternate sampling locations may be allowed if approved by the department. These alternate locations are described in department guidance. Purveyors may ask the department to approve an alternate sampling location for multiple sources within a single system that are blended prior to entry to the distribution system. The alternate sampling location shall consider the following:

(A) Source vulnerability;

(B) An updated organic monitoring plan showing location of all sources with current and proposed sampling locations;

(C) Individual source characteristics;

(D) Previous water quality information;

(E) Status of monitoring waiver applications; and

(F) Other information deemed necessary by the department.

(c) Composite samples:

(i) Purveyors may ask the certified lab to composite samples representing as many as five individual samples from within one system. Sampling procedures and protocols are outlined in department guidance;

(ii) For systems serving a population of less than three thousand three hundred one, the department may approve composite sampling between systems when those systems are part of an approved satellite management agency.

(d) The department may require the purveyor to sample both before and after treatment for one or more organic contaminants. The department shall notify the purveyor if and when this additional source sampling is required.

(e) Organic chemical monitoring plans.

(i) Purveyors of community and NTNC systems shall prepare an organic chemical monitoring plan and base routine monitoring on the plan.

(ii) The purveyor shall:

(A) Keep the monitoring plan on file with the system and make it available to the department for inspection upon request;

(B) Revise or expand the plan at any time the plan no longer reflects the monitoring requirements, procedures or sampling locations, or as directed by the department; and

(C) Submit the plan to the department for review and approval when requested and as part of the water system plan required under WAC 246-290-100.

(f) Monitoring waivers.

(i) Purveyors may request in writing, a monitoring waiver from the department for any organic monitoring requirement except those relating to unregulated VOCs;

(ii) Purveyors requesting a monitoring waiver shall comply with 40 CFR 141.24 (f)(7), 141.24 (f)(10), 141.24 (h)(6), 141.24 (h)(7) or 141.40 (n)(4);

(iii) Purveyors shall update and resubmit requests for waiver renewals as directed by the department; and

(iv) Failure to provide complete and accurate information in the waiver application shall be grounds for denial of the monitoring waiver.

(g) Purveyors with emergency and seasonal sources shall monitor those sources under the applicable requirements of this section when they are actively providing water to consumers.

(8) Unregulated chemicals.

(a) Unregulated inorganic contaminants. Purveyors of community and NTNC systems shall:

(i) Monitor for the unregulated inorganic chemicals listed in 40 CFR 141.40 (n)(12);

(ii) Comply with monitoring methods, frequencies, and sampling locations in accordance with 40 CFR 141.40 (n)(2) through 141.40 (n)(9) and 141.40 (n)(12); and

(iii) Apply in writing for a monitoring waiver according to the conditions outlined in 40 CFR 141.40 (n)(3), and the departmental procedures described in subsection (7)(f) of this section.

(b) Unregulated VOCs. Purveyors shall:

(i) Monitor in accordance with 40 CFR 141.40(e) and 141.40(j);

(ii) Comply with monitoring methods, frequency and sampling locations in accordance with 40 CFR 141.40(a) through 141.40(d), 141.40(g) and 141.40(i); and

(iii) Perform repeat monitoring for these compounds in accordance with 40 CFR 141.40(l).

(c) Unregulated SOCs. Purveyors shall:

(i) Monitor for the unregulated SOCs listed in 40 CFR 141.40 (n)(11); and

(ii) Comply with monitoring methods, frequencies, and sampling locations in accordance with 40 CFR 141.40 (n)(1) through 141.40 (n)(9).

Purveyors may request that the department defer this monitoring if a system has less than one hundred fifty service connections.

(d) Purveyors with emergency and seasonal sources shall monitor those sources under the applicable requirements of this section whenever they are actively providing water to consumers.

(9) Radionuclides.

(a) The purveyor's monitoring requirements for gross alpha particle activity, radium-226 and radium-228 shall be:

(i) **Community** systems shall monitor once every forty-eight months. Compliance shall be based on the analysis of

an annual composite of four consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals;

(ii) The purveyor may omit analysis for radium-226 and radium-228 if the gross alpha particle activity is less than five pCi/L; and

(iii) If the results of the initial analysis are less than half of the established MCL, the department may allow compliance with the monitoring requirements based on analysis of a single sample collected every forty-eight months.

(b) The purveyor's monitoring requirements for man-made radioactivity shall be:

(i) Purveyors of **community** systems using surface water sources and serving more than one hundred thousand persons and other department-designated water systems shall monitor for man-made radioactivity (beta particle and photon) every forty-eight months. Compliance shall be based on the analysis of a composite of four consecutive quarterly samples or the analysis of four quarterly samples; and

(ii) The purveyor of a water system located downstream from a nuclear facility as determined by the department, shall monitor once every three months for gross beta and iodine-131, and monitor once every twelve months for strontium-90 and tritium. The department may allow the substitution of environmental surveillance data taken in conjunction with a nuclear facility for direct monitoring of man-made radioactivity if the department determines that such data is applicable to a particular public water system.

(10) Other substances.

On the basis of public health concerns, the department may require the purveyor to monitor for additional substances.

TABLE 3
MONITORING LOCATION

Sample Type	Sample Location
Asbestos	One sample from distribution system or if required by department, from the source.
Bacteriological	From representative points throughout distribution system.
Complete Inorganic Chemical & Physical	From a point representative of the source, after treatment, and prior to entry to the distribution system.
Lead/Copper	From the distribution system at targeted sample tap locations.
Nitrate/Nitrite	From a point representative of the source, after treatment, and prior to entry to the distribution system.
Total Trihalomethanes -Surface Water	From points at extreme end, and at intermediate locations, in the distribution system from the source after treatment.
Potential Trihalomethanes -Ground Water	From the source before treatment.
Radionuclides	From the source.
Organic Chemicals (VOCs & SOCs)	From a point representative of the source, after treatment and prior to entry to distribution system.
Other Substances (unregulated chemicals)	From a point representative of the source, after treatment, and prior to entry to the distribution system, or as directed by the department.

(2003 Ed.)

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-300, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-300, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-300, filed 3/25/93, effective 4/25/93; 92-04-070 (Order 241B), § 246-290-300, filed 2/4/92, effective 3/6/92. Statutory Authority: Chapter 43.20 RCW. 91-07-031 (Order 150B), § 246-290-300, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-300, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-165, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-165, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-165, filed 9/8/83.]

WAC 246-290-310 Maximum contaminant levels (MCLs). (1) General.

(a) The purveyor shall be responsible for complying with the standards of water quality identified in this section. If a substance exceeds its maximum contaminant level (MCL), the purveyor shall take follow-up action in accordance with WAC 246-290-320.

(b) When enforcing the standards described under this section, the department shall enforce compliance with the primary standards as its first priority.

(2) Bacteriological.

(a) MCLs under this subsection shall be considered primary standards.

(b) Notwithstanding subsection (1) of this section, if coliform presence is detected in any sample, the purveyor shall take follow-up action in accordance with WAC 246-290-320(2).

(c) Acute MCL. An acute MCL for coliform bacteria occurs when there is:

(i) Fecal coliform presence in a repeat sample;

(ii) *E. coli* presence in a repeat sample; or

(iii) Coliform presence in any repeat samples collected as a follow-up to a sample with fecal coliform or *E. coli* presence.

(d) Nonacute MCL. A nonacute MCL for coliform bacteria occurs when:

(i) Systems taking less than forty routine samples during the month have more than one sample with coliform presence; or

(ii) Systems taking forty or more routine samples during the month have more than 5.0 percent with coliform presence.

(e) MCL compliance. The purveyor shall determine compliance with the coliform MCL for each month the system provides drinking water to the public. In determining MCL compliance, the purveyor shall:

(i) Include:

(A) Routine samples; and

(B) Repeat samples.

(ii) Not include:

(A) Samples invalidated under WAC 246-290-694 (1)(c); and

(B) Special purpose samples.

(3) Inorganic chemical and physical.

The primary and secondary MCLs are listed in Table 4 and 5:

TABLE 4
INORGANIC CHEMICAL CHARACTERISTICS

Substance	Primary MCLs (mg/L)
Antimony (Sb)	0.006
Arsenic (As)	0.05
Asbestos	7 million fibers/liter (longer than 10 microns)
Barium (Ba)	2.0
Beryllium (Be)	0.004
Cadmium (Cd)	0.005
Chromium (Cr)	0.1
Copper (Cu)	*
Cyanide (HCN)	0.2
Fluoride (F)	4.0
Lead (Pb)	*
Mercury (Hg)	0.002
Nickel (Ni)	0.1
Nitrate (as N)	10.0
Nitrite (as N)	1.0
Selenium (Se)	0.05
Sodium (Na)	*
Thallium (Tl)	0.002
Substance	Secondary MCLs (mg/L)
Chloride (Cl)	250.0
Fluoride (F)	2.0
Iron (Fe)	0.3
Manganese (Mn)	0.05
Silver (Ag)	0.1
Sulfate (SO ₄)	250.0
Zinc (Zn)	5.0

* Although the state board of health has not established MCLs for copper, lead, and sodium, there is sufficient public health significance connected with copper, lead, and sodium levels to require inclusion in inorganic chemical and physical source monitoring. For lead and copper, the EPA has established distribution system related levels at which a system is required to consider corrosion control. These levels, called "action levels," are 0.015 mg/L for lead and 1.3 mg/L for copper and are applied to the highest concentration in ten percent of all samples collected from the distribution system. The EPA has also established a recommended level of twenty mg/L for sodium as a level of concern for those consumers that may be restricted for daily sodium intake in their diets.

TABLE 5
PHYSICAL CHARACTERISTICS

Substance	Secondary MCLs
Color	15 Color Units
Specific Conductivity	700 umhos/cm
Total Dissolved Solids (TDS)	500 mg/L

(4) Trihalomethanes.

(a) The department shall consider standards under this subsection primary standards.

(b) The MCL for total trihalomethanes (TTHM) is 0.10 mg/L calculated on the basis of a running annual average of quarterly samples. The concentrations of each of the trihalomethane compounds (trichloromethane, dibromochloromethane, bromodichloromethane, and tribromomethane) are totaled to determine the TTHM level.

(c) There is no MCL for maximum total trihalomethane potential (MTTP). When the MTTP value exceeds 0.10

mg/L, the purveyor shall follow up as described under WAC 246-290-320 (6).

(5) Radionuclides.

(a) The department shall consider standards under this subsection primary standards.

(b) The MCLs for radium-226, radium-228, and gross alpha particle radioactivity are:

Substance	MCL (pCi/L)
Radium-226	3
Combined Radium-226 and Radium-228	5
Gross alpha particle activity (excluding uranium)	15

(c) The MCL for beta particle and photon radioactivity from man-made radionuclides is: The average annual concentration shall not produce an annual dose equivalent to the total body or any internal organ greater than four millirem/year.

NOTE: The department shall assume compliance with the four millirem/year dose limitation if the average annual concentration for gross beta activity, tritium, and strontium-90 are less than 50 pCi/L, 20,000 pCi/L, and 8 pCi/L respectively. When both tritium and strontium-90 are present, the sum of their annual dose equivalents to bone marrow shall not exceed four millirem/year.

(6) Organic chemicals.

(a) The department shall consider standards under this subsection primary standards.

(b) VOCs.

(i) The MCLs for VOCs shall be as listed in 40 CFR 141.61(a).

(ii) The department shall determine compliance with this subsection based on compliance with 40 CFR 141.24(f).

(c) SOCs.

(i) MCLs for SOCs shall be as listed in 40 CFR 141.61(c).

(ii) The department shall determine compliance with this subsection based on compliance with 40 CFR 141.24(h).

(7) Other chemicals.

(a) The state board of health shall determine maximum contaminant levels for any additional substances.

(b) Purveyors may be directed by the department to comply with state advisory levels (SALs) for contaminants that do not have a MCL established in chapter 246-290 WAC. SALs shall be:

(i) MCLs that have been promulgated by the EPA, but which have not yet been adopted by the state board of health; or

(ii) State board of health adopted levels for substances recommended by the department and not having an EPA established MCL. A listing of these may be found in the department document titled *Procedures and References for the Determination of State Advisory Levels for Drinking Water Contaminants* dated June 1996, that has been approved by the state board of health and is available.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-310, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-310, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-310, filed 3/25/93, effective 4/25/93; 92-04-070 (Order 241B), §

246-290-310, filed 2/4/92, effective 3/6/92. Statutory Authority: Chapter 43.20 RCW. 91-07-031 (Order 150B), § 246-290-310, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-310, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-175, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-175, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-175, filed 9/8/83.]

WAC 246-290-320 Follow-up action. (1) General.

(a) When an MCL violation occurs, the purveyor shall take follow-up action as described in this section.

(b) When a primary standard violation occurs, the purveyor shall:

(i) Notify the department in accordance with WAC 246-290-480;

(ii) Notify the consumers served by the system in accordance with WAC 246-290-495;

(iii) Determine the cause of the contamination; and

(iv) Take action as directed by the department.

(c) When a secondary standard violation occurs, the purveyor shall notify the department and take action as directed by the department.

(d) The department may require additional sampling for confirmation of results.

(2) Bacteriological.

(a) When coliform bacteria are present in any sample and the sample is not invalidated under (d) of this subsection, the purveyor shall ensure the following actions are taken:

(i) The sample is analyzed for fecal coliform or E. coli. When a sample with a coliform presence is not analyzed for E. coli or fecal coliforms, the sample shall be considered as having a fecal coliform presence for MCL compliance purposes;

(ii) Repeat samples are collected in accordance with (b) of this subsection;

(iii) The department is notified in accordance with WAC 246-290-480; and

(iv) The cause of the coliform presence is determined and corrected.

(b) Repeat samples.

(i) The purveyor shall collect repeat samples in order to confirm the original sample results and to determine the cause of the coliform presence. Additional treatment, such as batch or shock chlorination, shall not be instituted prior to the collection of repeat samples unless prior authorization is given by the department. Following collection of repeat samples, and before the analytical results are known, there may be a need to provide interim precautionary treatment or other means to insure public health protection. The purveyor shall contact the department to determine the best interim approach in this situation.

(ii) The purveyor shall collect and submit for analysis a set of repeat samples for every sample in which the presence of coliforms is detected. A set of repeat coliform samples consists of:

(A) Four repeat samples for systems collecting one routine coliform sample each month; or

(B) Three repeat samples for all systems collecting more than one routine coliform sample each month.

(iii) The purveyor shall collect repeat sample sets according to Table 7;

(iv) The purveyor shall collect one set of repeat samples for each sample with a coliform presence. All samples in a set of repeat samples shall be collected on the same day and submitted for analysis within twenty-four hours after notification by the laboratory of a coliform presence, or as directed by the department.

(v) When repeat samples have coliform presence, the purveyor shall:

(A) Contact the department and collect a minimum of one additional set of repeat samples as directed by the department; or

(B) Collect one additional set of repeat samples for each sample where coliform presence was detected.

(vi) The purveyor of a system providing water to consumers via a single service shall collect repeat samples from the same location as the sample with a coliform presence. The set of repeat samples shall be collected:

(A) On the same collection date;

(B) Over consecutive days with one sample collected each day until the required samples in the set of repeat samples are collected; or

(C) As directed by the department.

(vii) If a sample with a coliform presence was collected from the first two or last two active services, the purveyor shall monitor as directed by the department;

(viii) The purveyor may change a previously submitted routine sample to a sample in a set of repeat samples when the purveyor:

(A) Collects the sample within five adjacent service connections of the location from which the initial sample with a coliform presence was collected;

(B) Collects the sample after the initial sample with a coliform presence was submitted for analysis;

(C) Collects the sample on the same day as other samples in the set of repeat samples, except under (b)(iv) of this subsection; and

(D) Requests and receives approval from the department for the change.

(ix) The department may determine that sets of repeat samples specified under this subsection are not necessary during a month when a nonacute coliform MCL violation is determined for the system.

**Table 7
REPEAT SAMPLE REQUIREMENTS**

# OF ROUTINE SAMPLES COLLECTED EACH MONTH	# OF SAMPLES IN A SET OF REPEAT SAMPLES	LOCATIONS FOR REPEAT SAMPLES (COLLECT AT LEAST ONE SAMPLE PER SITE)
1	4	<ul style="list-style-type: none"> ◆ Site of previous sample with a coliform presence ◆ Within 5 active services upstream of site of sample with a coliform presence ◆ Within 5 active services downstream of site of sample with a coliform presence ◆ At any other active service or from a location most susceptible to contamination (i.e., well or reservoir)

# OF ROUTINE SAMPLES COLLECTED EACH MONTH	# OF SAMPLES IN A SET OF REPEAT SAMPLES	LOCATIONS FOR REPEAT SAMPLES (COLLECT AT LEAST ONE SAMPLE PER SITE)
more than 1	3	<ul style="list-style-type: none"> ◆ Site of previous sample with a coliform presence ◆ Within 5 active services upstream of site of sample with a coliform presence ◆ Within 5 active services downstream of site of sample with a coliform presence

(c) Monitoring frequency following a coliform presence. Systems having one or more coliform presence samples that were not invalidated during the previous month shall collect and submit for analysis the minimum number of samples shown in the last column of Table 2.

(i) The purveyor may obtain a reduction in the monitoring frequency requirement when one or more samples with a coliform presence were collected during the previous month, if the purveyor proves to the satisfaction of the department;

(A) The cause of the sample with a coliform presence; and

(B) The problem is corrected before the end of the next month the system provides water to the public.

(ii) If the monitoring frequency requirement is reduced, the purveyor shall collect and submit at least the minimum number of samples required when no samples with a coliform presence were collected during the previous month.

(d) Invalid samples. Coliform samples may be determined to be invalid under any of the following conditions:

(i) A certified laboratory determines that the sample results show:

(A) Multiple tube technique cultures that are turbid without appropriate gas production;

(B) Presence-absence technique cultures that are turbid in the absence of an acid reaction;

(C) Occurrence of confluent growth patterns or growth of TNTC (too numerous to count) colonies without a surface sheen using a membrane filter analytic technique;

(ii) The analyzing laboratory determines there is excess debris in the sample.

(iii) The analyzing laboratory establishes that improper sample collection or analysis occurred;

(iv) The department determines that a nondistribution system problem has occurred as indicated by:

(A) All samples in the set of repeat samples collected at the same location, including households, as the original coliform presence sample also are coliform presence; and

(B) All other samples from different locations (households, etc.) in the set of repeat samples are free of coliform.

(v) The department determines a coliform presence result is due to a circumstance or condition that does not reflect water quality in the distribution system.

(e) Follow-up action when an invalid sample is determined. The purveyor shall take the following action when a coliform sample is determined to be invalid:

(i) Collect and submit for analysis an additional coliform sample from the same location as each invalid sample within twenty-four hours of notification of the invalid sample; or

(ii) In the event that it is determined that the invalid sample resulted from circumstances or conditions not reflective of distribution system water quality, collect a set of samples in accordance with Table 7; and

(iii) Collect and submit for analysis samples as directed by the department.

(f) Invalidated samples shall not be included in determination of the sample collection requirement for compliance with this chapter.

(3) Inorganic chemical and physical follow-up monitoring shall be conducted in accordance with the following:

(a) For nonnitrate/nitrite primary inorganic chemicals, 40 CFR 141.23 (a)(4), 141.23 (b)(8), 141.23 (c)(7), 141.23 (f)(1), 141.23(g), 141.23(m) and 141.23(n);

(b) For nitrate, 40 CFR 141.23 (a)(4), 141.23 (d)(2), 141.23 (d)(3), 141.23 (f)(2), 141.23(g), 141.23(m), 141.23(n), and 141.23(o);

(c) For nitrite, 40 CFR 141.23 (a)(4), 141.23 (e)(3), 141.23 (f)(2), and 141.23(g); or

(d) The purveyor of any public water system providing service that has secondary inorganic MCL exceedances shall take follow-up action as required by the department. Follow-up action shall be commensurate with the degree of consumer acceptance of the water quality and their willingness to bear the costs of meeting the secondary standard. For new community water systems and new nontransient noncommunity water systems without active consumers, treatment for secondary contaminant MCL exceedances will be required.

(4) Lead and copper follow-up monitoring shall be conducted in accordance with 40 CFR 141.85(d), 141.86 (d)(2), 141.86 (d)(3), 141.87(d) and 141.88(b) through 141.88(d).

(5) Turbidity.

Purveyors monitoring turbidity in accordance with Part 6 of this chapter shall provide follow-up in accordance with WAC 246-290-634.

(6) Trihalomethanes. When the average of all samples taken during any twelve-month period exceeds the MCL for total trihalomethanes, the violation is confirmed and the purveyor shall take corrective action as required by the department, and consistent with 40 CFR 141.30 (b)(3). When the maximum trihalomethane potential (MTTP) result is equal to or greater than 0.10 mg/L and the result is confirmed by a promptly collected repeat sample, the purveyor shall provide for additional monitoring and take action as directed by the department.

(7) Organic chemicals. Follow-up monitoring shall be conducted in accordance with the following:

(a) For VOCs, 40 CFR 141.24 (f)(11) through 141.24 (f)(15); or

(b) For SOCs, 40 CFR 141.24(b), 141.24(c) and 141.24 (h)(7) through 141.24 (h)(11).

(8) Unregulated inorganic and organic chemicals.

(a) Follow-up monitoring shall be conducted in accordance with 40 CFR 141.40 (n)(8) and 141.40 (n)(9).

(b) When an unregulated chemical is verified at a concentration above the detection limit, the purveyor shall:

(i) Submit the sample analysis results to the department within seven days of receipt from the laboratory; and

(ii) Sample the source a minimum of once every three months for one year and then annually thereafter during the

three-month period when the highest previous measurement occurred.

(c) If the department determines that an unregulated chemical is verified at a level greater than a SAL, the department shall notify the purveyor in writing. The purveyor shall repeat sample the source as soon as possible after initial department notice that a SAL has been exceeded. The purveyor shall submit the analysis results to the department within seven days of receipt from the laboratory. If any repeat sample confirms that a SAL has been exceeded, the purveyor shall:

(i) Provide consumer information in accordance with WAC 246-290-495;

(ii) Investigate the cause of the contamination; and

(iii) Take follow-up or corrective action as required by the department.

(d) The department may reduce the purveyor's monitoring requirement for a source detecting an unregulated chemical if the source has been monitored annually for at least three years, and all analysis results are less than the SAL.

(9) The department shall determine the purveyor's follow-up action when a substance not included in this chapter is detected.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-320, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-320, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-320, filed 3/25/93, effective 4/25/93; 92-04-070 (Order 241B), § 246-290-320, filed 2/4/92, effective 3/6/92. Statutory Authority: Chapter 43.20 RCW. 91-07-031 (Order 150B), § 246-290-320, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-320, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-185, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-185, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-185, filed 9/8/83.]

PART 5.

WATER SYSTEM OPERATIONS

WAC 246-290-415 Operations and maintenance. (1)

The purveyor shall ensure that the system is operated in accordance with the operations and maintenance program as established in the approved water system plan required under WAC 246-290-100 or the small water system management program under WAC 246-290-105.

(2) The operations and maintenance program shall include the following elements as applicable:

(a) Water system management and personnel;

(b) Operator certification;

(c) Comprehensive monitoring plan for all contaminants under WAC 246-290-300;

(d) Emergency response program;

(e) Cross-connection control program; and

(f) Maintenance of service reliability in accordance with WAC 246-290-420.

(3) The purveyor shall ensure that the system is operated in accordance with good operations procedures such as those available in texts, handbooks, and manuals available from the following sources:

(a) American Water Works Association (AWWA), 6666 West Quincy Avenue, Denver, Colorado 80235;

(2003 Ed.)

(b) American Society of Civil Engineers (ASCE), 345 East 47th Street, New York, New York 10017-2398;

(c) Ontario Ministry of the Environment, 135 St. Clair Avenue West, Toronto, Ontario M4V1B5, Canada;

(d) The Chlorine Institute, 2001 "L" Street NW, Washington, D.C. 20036;

(e) California State University, 600 "J" Street, Sacramento, California 95819;

(f) Health Research Inc., Health Education Services Division, P.O. Box 7126, Albany, New York 12224; and

(g) Any other standards acceptable to the department.

(4) The purveyor shall not establish or maintain a bypass to divert water around any feature of a treatment process, except by written approval from the department.

(5) The purveyor shall take preventive or corrective action as directed by the department when results of an inspection conducted by the department indicate conditions which are currently or may become a detriment to system operation.

(6) The purveyor of a system using surface water or GWI shall meet operational requirements specified in Part 6 of this chapter.

(7) The purveyor shall have a certified operator if required under chapter 70.119 RCW and chapter 246-292 WAC.

(8) The purveyor shall at all times employ reasonable security measures to assure the raw water intake facilities, water treatment processes, water storage facilities, and the distribution system are protected from possible damage or compromise by unauthorized persons, animals, vegetation, or similar intruding agents. Such measures include elements such as locks on hatches, fencing of facilities, screening of reservoir vents or openings, and other recommendations as may be found in the current edition of the *Recommended Standards for Water Works, A Committee Report of the Great Lakes - Upper Mississippi River Board of State Public Health and Environmental Managers*.

(9) All purveyors utilizing ground water wells shall monitor well levels from ground level to the static water level on a seasonal basis, including low demand and high demand periods, to document the continuing availability of the source to meet projected, long-term demands. Purveyors shall maintain this data and provide it to the department upon request.

(10) All operation and maintenance practices shall conform to Part 5 of this chapter.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-415, filed 3/9/99, effective 4/9/99.]

WAC 246-290-416 Sanitary surveys. (1) All public water systems shall submit to a sanitary survey conducted by the department, or the department's designee, based upon the following schedule:

(a) For community and nontransient noncommunity water systems, every five years, or more frequently as determined by the department. The sanitary surveys shall be consistent with the schedules presented in 40 CFR 141.21; and

(b) For transient noncommunity water systems, every five years unless the system uses only disinfected ground water and has an approved wellhead protection program, in which case the survey shall be every ten years. The sanitary

surveys shall be conducted consistent with schedules presented in 40 CFR 141.21.

(2) All public water system purveyors shall be responsible for:

(a) Ensuring cooperation in scheduling sanitary surveys with the department, or its designee; and

(b) Ensuring the unrestricted availability of all facilities and records at the time of the sanitary survey.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-416, filed 3/9/99, effective 4/9/99.]

WAC 246-290-420 Reliability and emergency response. (1) All public water systems shall provide an adequate quantity and quality of water in a reliable manner at all times consistent with the requirements of this chapter.

(2) During normal operating conditions, for both average and peak demand periods, water pressure at the consumer's service meter, or property line if a meter is not used, shall be maintained at the approved design pressure, but in no case be less than 20 psi (140 kPa). Water quality shall be maintained as required in Part 4 and Part 6 of this chapter.

(3) When fire flow is required, 20 psi (140 kPa) at the operating hydrant and at least positive pressure shall be maintained throughout the system under fire flow conditions.

(4) The purveyor shall address abnormal operating conditions, such as those associated with fires, floods, unscheduled power outages, facility failures, and system maintenance, by using measures consistent with applicable regulations and industry standards to ensure the system is constructed, maintained, and operated to protect against the risk of contamination by cross-connections as a result of loss of system pressure.

(5) For operations during abnormal conditions, the purveyor shall establish the level of reliability, in accordance with consumer expectations, to ensure prevention of loss of pressure or prompt restoration of pressure when a loss of pressure has occurred. Consumer expectations may be established by a simple majority of the affected consumers within the system's service area, or within specific, definable pressure zones when different levels of service may be encountered. A simple majority of consumers can be associated with either a vote of the consumers for privately owned and operated systems, or of the system's governing body, such as council, board, or commission, for publicly governed systems. Consumer expectations shall not be used by a purveyor to justify a failure to address routine or repeated loss of pressure within the system, or within specific, definable pressure zones, because of the purveyor's failure to properly construct, maintain, or operate the system. The level of reliability established under this subsection, and measures for achieving such reliability, shall be identified in the operations and maintenance program and incorporated into the water system design, and shall be approved by the department. The level of reliability shall not affect the purveyor's obligations under subsections (1) through (4) of this section.

(6) The purveyor shall implement all appropriate measures necessary to meet the identified level of reliability for normal and abnormal operating conditions. Procedures for system operation during normal and abnormal operating conditions shall be documented in an operations and maintenance

and emergency response program in accordance with WAC 246-290-415 and shall be implemented in a timely and reasonable manner.

(7) If a purveyor is unable to satisfactorily address departmental concerns or consumer complaints regarding the level of reliability associated with normal or abnormal operating conditions, the purveyor may be required to prepare a project report pursuant to WAC 246-290-110 that addresses an evaluation of the problem, impacts on affected consumers, and recommended corrective action. Unless the department determines that public health protection requires otherwise, improvements related to abnormal operating conditions described under subsection (5) of this section will be required commensurate with the established level of reliability for abnormal operating conditions.

(8) Restrictions on designed, or historically documented, normal water uses shall not be allowed except under the following conditions:

(a) Whenever there is clear evidence that, unless limitations are imposed, water use at normal levels will lead to a relatively rapid depletion of water source reserves, such as in drought situations or when significant facility failures occur;

(b) Whenever a water system observes that demands for water exceed the available supply, as a result of such events as miscalculated planning, inattentive operation, or unforeseen problems with sources and that limitations would be necessary to insure basic levels of service while additional sources were being sought or developed, or the situation was being otherwise remedied; or

(c) Whenever the water system institutes restrictions as part of a water conservation program which has been accepted by the system consumers through appropriate public decision-making processes within existing governance mechanisms, or has been mandated under state regulatory authority.

(9) A purveyor shall provide the department with the current names, addresses, and telephone numbers of the owners, operators, and emergency contact persons for the system, including any changes to this information. The purveyor shall also maintain twenty-four-hour phone availability and shall respond to consumer concerns and service complaints in a timely manner.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-420, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050, 93-08-011 (Order 352B), § 246-290-420, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-420, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339, 89-21-020 (Order 336), § 248-54-201, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045, 88-05-057 (Order 307), § 248-54-201, filed 2/17/88.]

WAC 246-290-451 Disinfection of drinking water. (1)

No portion of a public water system containing potable water shall be put into service, nor shall service be resumed until the facility has been effectively disinfected.

(a) In cases of new construction, drinking water shall not be furnished to the consumer until satisfactory bacteriological samples have been analyzed by a laboratory certified by the state; and

(b) In cases of existing water mains, when the integrity of the main is lost resulting in a significant loss of pressure that places the main at risk to cross-connection contamination

tion, the purveyor shall use standard industry practices such as flushing, disinfection, and/or bacteriological sampling to ensure adequate and safe water quality prior to the return of the line to service;

(c) If a cross-connection is confirmed, the purveyor shall satisfy the reporting requirements as described under WAC 246-290-490(8).

(2) The procedure used for disinfection shall conform to standards published by the American Water Works Association, or other industry standards acceptable to the department.

(3) The purveyor of a system using ground water and required to disinfect, shall meet the following disinfection requirements, unless otherwise directed by the department:

(a) Minimum contact time at a point at or before the first consumer of:

(i) Thirty minutes if 0.2 mg/L free chlorine residual is maintained;

(ii) Ten minutes if 0.6 mg/L free chlorine residual is maintained; or

(iii) Any combination of free chlorine residual concentration (C), measured in mg/L, and contact time (T), measured in minutes, that results in a CT product (C X T) of greater than or equal to six; or

(iv) Contact time (T) for surface water or GWI sources shall be determined in accordance with WAC 246-290-636.

(b) Detectable residual disinfectant concentration in all active parts of the distribution system, measured as total chlorine, free chlorine, combined chlorine, or chlorine dioxide;

(c) Water in the distribution system with an HPC level less than or equal to 500 organisms/mL is considered to have a detectable residual disinfectant concentration.

(4) The department may require the purveyor to provide longer contact times, higher chlorine residuals, or additional treatment to protect the health of consumers served by the public water system.

(5) The purveyor of a system using surface water or GWI shall meet disinfection requirements specified in Part 6 of this chapter.

(6) The purveyor of a system providing ground water disinfection shall monitor residual disinfectant concentration at representative points in the system on a daily basis, and at the same time and location of routine and repeat coliform sample collection. Frequency of disinfection residual monitoring may be reduced upon written request to the department if it can be shown that disinfection residuals can be maintained on a reliable basis without the provision of daily monitoring.

(7) The analyses shall be conducted in accordance with "standard methods." To assure adequate monitoring of chlorine residual, the department may require the use of continuous chlorine residual analyzers and recorders.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-451, filed 3/9/99, effective 4/9/99.]

WAC 246-290-455 Operation of chemical contaminant treatment facilities. (1) Purveyors shall ensure finished drinking water from chemical contaminant treatment facilities complies with the minimum water quality standards established in WAC 246-290-310. This section does not

(2003 Ed.)

apply to facilities used only for corrosion control treatment purposes.

(2) The purveyor shall collect finished drinking water samples at a point directly downstream of the treatment system prior to the first consumer on a monthly basis.

(a) Finished drinking water samples from treatment systems utilized for removal of contaminants with established primary MCLs shall be submitted to a certified laboratory for analysis of the specific contaminant(s) of concern.

(b) Finished drinking water samples from treatment systems utilized for removal of contaminants with established secondary MCLs shall be submitted to a certified laboratory for analysis or analyzed for the specific contaminant(s) of concern by the purveyor through department-approved on-site methods.

(c) Additional finished drinking water monitoring may be required by the department based on the complexity or size of the water system.

(3) If primary MCLs following treatment are exceeded in four or more months of a consecutive twelve-month compliance period, the purveyor shall submit a project report to the department that addresses the failure to maintain compliance. The project report shall include methods and schedules to correct the treatment deficiency and/or indicate schedules for implementing an alternate source of supply or an effective treatment technology.

(4) If secondary MCLs following treatment are exceeded in four or more months of a consecutive twelve-month compliance period, the purveyor shall take action per WAC 246-290-320 (3)(d).

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-455, filed 3/9/99, effective 4/9/99.]

WAC 246-290-460 Fluoridation of drinking water.

(1) Purveyors shall obtain written department approval of fluoridation treatment facilities before placing them in service.

(2) Where fluoridation is practiced, purveyors shall maintain fluoride concentrations in the range 0.8 through 1.3 mg/L throughout the distribution system.

(3) Where fluoridation is practiced, purveyors shall take the following actions to ensure that concentrations remain at optimal levels and that fluoridation facilities and monitoring equipment are operating properly:

(a) Daily monitoring.

(i) Take daily monitoring samples for each point of fluoride addition and analyze the fluoride concentration. Samples must be taken downstream from each fluoride injection point at the first sample tap where adequate mixing has occurred.

(ii) Record the results of daily analyses in a monthly report format acceptable to the department. A report must be made for each point of fluoride addition.

(iii) Submit monthly monitoring reports to the department within the first ten days of the month following the month in which the samples were collected.

(b) Monthly split sampling.

(i) Take a monthly split sample at the same location where routine daily monitoring samples are taken. A monthly split sample must be taken for each point of fluoride addition.

[Title 246 WAC—p. 583]

(ii) Analyze a portion of the sample and record the results on the lab sample submittal form and on the monthly report form.

(iii) Forward the remainder of the sample, along with the completed sample form to the state public health laboratory, or other state-certified laboratory, for fluoride analysis.

(iv) If a split sample is found by the certified lab to be:

(A) Not within the range of 0.8 to 1.3 mg/l, the purveyor's fluoridation process shall be considered out of compliance.

(B) Differing by more than 0.30 mg/l from the purveyor's analytical result, the purveyor's fluoride testing shall be considered out of control.

(4) Purveyors shall conduct analyses prescribed in subsection (3) of this section in accordance with procedures listed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

(5) The purveyor may be required by the department to increase the frequency, and/or change the location of sampling prescribed in subsection (3) of this section to ensure the adequacy and consistency of fluoridation.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-460, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 91-02-051 (Order 124B), recodified as § 246-290-460, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-235, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-235, filed 9/8/83.]

WAC 246-290-470 Uncovered distribution reservoirs. (1) Existing uncovered distribution reservoirs shall be operated based on a plan of operation approved by the department.

(2) Purveyors with uncovered distribution reservoirs shall have a department-approved plan and schedule to cover all reservoirs on file with the department.

(3) The plan of operation shall address the following elements as a minimum:

(a) Assurance of the means and levels associated with the provision of continuous disinfection at all times water is being delivered to the public, including the reliability provisions outlined in WAC 246-290-420;

(b) Description of the means for control of debris, algal, or other aquatic organism growths, surface water runoff, and atmospheric or avian-borne airborne contamination;

(c) Procedures for ensuring that construction will not lead to reservoir contamination;

(d) Provisions for ensuring adequate security measures are provided; and

(e) Any required, or department-directed, monitoring and reporting.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-470, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-470, filed 3/25/93, effective 4/25/93; 91-02-051 (Order 124B), recodified as § 246-290-470, filed 12/27/90, effective 1/31/91; 83-19-002 (Order 266), § 248-54-245, filed 9/8/83.]

WAC 246-290-480 Recordkeeping and reporting. (1) Records. The purveyor shall keep the following records of operation and water quality analyses:

(a) Bacteriological and turbidity analysis results shall be kept for five years. Chemical analysis results shall be kept for

as long as the system is in operation. Records of daily source meter readings shall be kept for ten years. Other records of operation and analyses required by the department shall be kept for three years. All records shall bear the signature of the operator in responsible charge of the water system or his or her representative. Systems shall keep these records available for inspection by the department and shall send the records to the department if requested. Actual laboratory reports may be kept or data may be transferred to tabular summaries, provided the following information is included:

(i) The date, place, and time of sampling, and the name of the person collecting the sample;

(ii) Identification of the sample type (routine distribution system sample, repeat sample, source or finished water sample, or other special purpose sample);

(iii) Date of analysis;

(iv) Laboratory and person responsible for performing analysis;

(v) The analytical method used; and

(vi) The results of the analysis.

(b) Records of action taken by the system to correct violations of primary drinking water standards. For each violation, records of actions taken to correct the violation, and copies of public notifications shall be kept for no less than three years after the last corrective action taken.

(c) Copies of any written reports, summaries, or communications relating to sanitary surveys or SPIs of the system conducted by system personnel, by a consultant or by any local, state, or federal agency, shall be kept for ten years after completion of the sanitary survey or SPI involved.

(d) Copies of project reports, construction documents and related drawings, inspection reports and approvals shall be kept for the life of the facility.

(e) Where applicable, daily records of the following shall be kept for a minimum of three years:

(i) Chlorine residual;

(ii) Fluoride level;

(iii) Water treatment plant performance including, but not limited to:

(A) Type of chemicals used and quantity;

(B) Amount of water treated; and

(C) Results of analyses.

(iv) Turbidity;

(v) Source meter readings; and

(vi) Other information as specified by the department.

(2) Reporting.

(a) Unless otherwise specified in this chapter, the purveyor shall report to the department within forty-eight hours:

(i) The failure to comply with the primary standards or treatment technique requirements under this chapter;

(ii) The failure to comply with the monitoring requirements under this chapter; and

(iii) The violation of a primary MCL.

(b) The purveyor shall submit to the department reports required by this chapter, including tests, measurements, and analytic reports. Monthly reports are due before the tenth day of the following month, unless otherwise specified in this chapter.

(c) The purveyor shall submit to the department copies of any written summaries or communications relating to the

status of monitoring waivers during each monitoring cycle or as directed by the department.

(d) Source meter readings shall be made available to the department.

(e) Water facilities inventory form (WFI).

(i) Purveyors of **community** and NTNC systems shall submit an annual WFI update to the department;

(ii) Purveyors of TNC systems shall submit an updated WFI to the department as requested;

(iii) Purveyors shall submit an updated WFI to the department within thirty days of any change in name, category, ownership, or responsibility for management of the water system, or addition of source or storage facilities; and

(iv) At a minimum the completed WFI shall provide the current names, addresses, and telephone numbers of the owners, operators, and emergency contact persons for the system.

(v) Purveyors shall provide in the WFI total annual water production and use, including:

(i) Total annual water production for each source;

(ii) Monthly and annual totals for water purchased from or sold to other purveyors; and

(iii) For purveyors with more than one thousand service connections, monthly and annual totals for purveyor consumer classes. Monthly data may be estimated if the water system bills less frequently than monthly.

(f) Bacteriological.

(i) The purveyor shall notify the department of the presence of:

(A) Coliform in a sample, within ten days of notification by the laboratory; and

(B) Fecal coliform or E. coli in a sample, by the end of the business day in which the purveyor is notified by the laboratory. If the purveyor is notified of the results after normal close of business, then the purveyor shall notify the department before the end of the next business day.

(ii) When a coliform MCL violation is determined, the purveyor shall:

(A) Notify the department within twenty-four hours of determining acute coliform MCL violations; and

(B) Notify the department before the end of the next business day when a nonacute coliform MCL is determined.

(g) Systems monitoring for unregulated VOCs in accordance with WAC 246-290-300 (8)(b), shall send a copy of the results of such monitoring and any public notice to the department within thirty days of receipt of analytical results.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-480, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-480, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-480, filed 3/25/93, effective 4/25/93; 92-04-070 (Order 241B), § 246-290-480, filed 2/4/92, effective 3/6/92; 91-02-051 (Order 124B), recodified as § 246-290-480, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. 89-21-020 (Order 336), § 248-54-265, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. 88-05-057 (Order 307), § 248-54-265, filed 2/17/88. Statutory Authority: RCW 43.20.050. 83-19-002 (Order 266), § 248-54-265, filed 9/8/83.]

WAC 246-290-490 Cross-connection control. (1) Applicability, purpose, and responsibility.

(a) All community water systems shall comply with the cross-connection control requirements specified in this section.

(2003 Ed.)

(b) All noncommunity water systems shall apply the principles and provisions of this section, including subsection (4)(b) of this section, as applicable to protect the public water system from contamination via cross-connections. Noncommunity systems that comply with subsection (4)(b) of this section and the provisions of WAC 51-46-0603 of the UPC (which addresses the installation of backflow preventers at points of water use within the potable water system) shall be considered in compliance with the requirements of this section.

(c) The purpose of the purveyor's cross-connection control program shall be to protect the public water system, as defined in WAC 246-290-010, from contamination via cross-connections.

(d) The purveyor's responsibility for cross-connection control shall begin at the water supply source, include all the public water treatment, storage, and distribution facilities, and end at the point of delivery to the consumer's water system, which begins at the downstream end of the service connection or water meter located on the public right-of-way or utility-held easement.

(e) Under the provisions of this section, purveyors are not responsible for eliminating or controlling cross-connections within the consumer's water system. Under chapter 19.27 RCW, the responsibility for cross-connection control within the consumer's water system, i.e., within the property lines of the consumer's premises, falls under the jurisdiction of the local administrative authority.

(2) General program requirements.

(a) The purveyor shall develop and implement a cross-connection control program that meets the requirements of this section, but may establish a more stringent program through local ordinances, resolutions, codes, bylaws, or operating rules.

(b) Purveyors shall ensure that good engineering and public health protection practices are used in the development and implementation of cross-connection control programs. Department publications and the most recently published editions of references, such as, but not limited to, those listed below, may be used as guidance for cross-connection program development and implementation:

(i) *Manual of Cross-Connection Control* published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California (USC Manual); or

(ii) *Cross-Connection Control Manual, Accepted Procedure and Practice* published by the Pacific Northwest Section of the American Water Works Association (PNWS-AWWA Manual).

(c) The purveyor may implement the cross-connection control program, or any portion thereof, directly or by means of a contract with another agency or party acceptable to the department.

(d) The purveyor shall coordinate with the local administrative authority in all matters concerning cross-connection control. The purveyor shall document and describe such coordination, including delineation of responsibilities, in the written cross-connection control program required in (e) of this subsection.

[Title 246 WAC—p. 585]

(e) The purveyor shall include a written description of the cross-connection control program in the water system plan required under WAC 246-290-100 or the small water system management program required under WAC 246-290-105. The cross-connection control program shall include the minimum program elements described in subsection (3) of this section.

(f) The purveyor shall ensure that cross-connections between the distribution system and a consumer's water system are eliminated or controlled by the installation of an approved backflow preventer commensurate with the degree of hazard. This can be accomplished by implementation of a cross-connection program that relies on:

(i) Premises isolation as defined in WAC 246-290-010; or

(ii) Premises isolation and in-premises protection as defined in WAC 246-290-010.

(g) Purveyors with cross-connection control programs that rely both on premises isolation and in-premises protection:

(i) Shall comply with the premises isolation requirements specified in subsection (4)(b) of this section; and

(ii) May reduce premises isolation requirements and rely on in-premises protection for premises other than the type not addressed in subsection (4)(b) of this section, if the conditions in (h) of this subsection are met.

(h) Purveyors may rely on in-premises protection only when the following conditions are met:

(i) The in-premises backflow preventers provide a level of protection commensurate with the purveyor's assessed degree of hazard;

(ii) Backflow preventers which provide the in-premises backflow protection meet the definition of approved backflow preventers as described in WAC 246-290-010;

(iii) The approved backflow preventers are installed, inspected, tested (if applicable), maintained, and repaired in accordance with subsections (6) and (7) of this section;

(iv) Records of such backflow preventers are maintained in accordance with subsections (3)(j) and (8) of this section; and

(v) The purveyor has reasonable access to the consumer's premises to conduct an initial hazard evaluation and periodic reevaluations to determine whether the in-premises protection is adequate to protect the purveyor's distribution system.

(i) The purveyor shall take appropriate corrective action within its authority if:

(i) A cross-connection exists that is not controlled commensurate to the degree of hazard assessed by the purveyor; or

(ii) A consumer fails to comply with the purveyor's requirements regarding the installation, inspection, testing, maintenance or repair of approved backflow preventers required by this chapter.

(j) The purveyor's corrective action may include, but is not limited to:

(i) Denying or discontinuing water service to a consumer's premises until the cross-connection hazard is eliminated or controlled to the satisfaction of the purveyor;

(ii) Requiring the consumer to install an approved backflow preventer for premises isolation commensurate with the degree of hazard; or

(iii) The purveyor installing an approved backflow preventer for premises isolation commensurate with the degree of hazard.

(k) Purveyors denying or discontinuing water service to a consumer's premises for one or more of the reasons listed in (i) of this subsection shall notify the local administrative authority prior to taking such action except in the event of an emergency.

(l) The purveyor shall prohibit the intentional return of used water to the purveyor's distribution system. Such water would include, but is not limited to, water used for heating, cooling, or other purposes within the consumer's water system.

(3) Minimum elements of a cross-connection control program.

(a) To be acceptable to the department, the purveyor's cross-connection control program shall include the minimum elements identified in this subsection.

(b) Element 1: The purveyor shall adopt a local ordinance, resolution, code, bylaw, or other written legal instrument that:

(i) Establishes the purveyor's legal authority to implement a cross-connection control program;

(ii) Describes the operating policies and technical provisions of the purveyor's cross-connection control program; and

(iii) Describes the corrective actions used to ensure that consumers comply with the purveyor's cross-connection control requirements.

(c) Element 2: The purveyor shall develop and implement procedures and schedules for evaluating new and existing service connections to assess the degree of hazard posed by the consumer's premises to the purveyor's distribution system and notifying the consumer within a reasonable time frame of the hazard evaluation results. At a minimum, the program shall meet the following:

(i) For new connections made on or after the effective date of these regulations, procedures shall ensure that an initial evaluation is conducted before service is provided;

(ii) For existing connections made prior to the effective date of these regulations, procedures shall ensure that an initial evaluation is conducted in accordance with a schedule acceptable to the department; and

(iii) For all service connections, once an initial evaluation has been conducted, procedures shall ensure that periodic reevaluations are conducted in accordance with a schedule acceptable to the department and whenever there is a change in the use of the premises.

(d) Element 3: The purveyor shall develop and implement procedures and schedules for ensuring that:

(i) Cross-connections are eliminated whenever possible;

(ii) When cross-connections cannot be eliminated, they are controlled by installation of approved backflow preventers commensurate with the degree of hazard; and

(iii) Approved backflow preventers are installed in accordance with the requirements of subsection (6) of this section.

(e) Element 4: The purveyor shall ensure that personnel, including at least one person certified as a CCS, are provided to develop and implement the cross-connection control program.

(f) Element 5: The purveyor shall develop and implement procedures to ensure that approved backflow preventers are inspected and/or tested (as applicable) in accordance with subsection (7) of this section.

(g) Element 6: The purveyor shall develop and implement a backflow prevention assembly testing quality control assurance program, including, but not limited to, documentation of tester certification and test kit calibration, test report contents, and time frames for submitting completed test reports.

(h) Element 7: The purveyor shall develop and implement (when appropriate) procedures for responding to backflow incidents.

(i) Element 8: The purveyor shall include information on cross-connection control in the purveyor's existing program for educating consumers about water system operation. Such a program may include periodic bill inserts, public service announcements, pamphlet distribution, notification of new consumers and consumer confidence reports.

(j) Element 9: The purveyor shall develop and maintain cross-connection control records including, but not limited to, the following:

(i) A master list of service connections and/or consumer's premises where the purveyor relies upon approved backflow preventers to protect the public water system from contamination, the assessed hazard level of each, and the required backflow preventer(s);

(ii) Inventory information on:

(A) Approved air gaps installed in lieu of approved assemblies including exact air gap location, assessed degree of hazard, installation date, history of inspections, inspection results, and person conducting inspections;

(B) Approved backflow assemblies including exact assembly location, assembly description (type, manufacturer, model, size, and serial number), assessed degree of hazard, installation date, history of inspections, tests and repairs, test results, and person performing tests; and

(C) Approved AVBs used for irrigation system applications including location, description (manufacturer, model, and size), installation date, history of inspection(s), and person performing inspection(s).

(iii) Cross-connection program summary reports and backflow incident reports required under subsection (8) of this section.

(k) Element 10: Purveyors who distribute and/or have facilities that receive reclaimed water within their water service area shall meet any additional cross-connection control requirements imposed by the department under a permit issued in accordance with chapter 90.46 RCW.

(4) Approved backflow preventer selection.

(a) The purveyor shall ensure that a CCS:

(i) Assesses the degree of hazard posed by the consumer's water system upon the purveyor's distribution system; and

(ii) Determines the appropriate method of backflow protection for premises isolation in accordance with Table 8.

(2003 Ed.)

TABLE 8
APPROPRIATE METHODS OF BACKFLOW PROTECTION FOR
PREMISES ISOLATION

Degree of Hazard	Application Condition	Appropriate Approved Backflow Preventer
High health cross-connection hazard	Backsiphonage or backpressure backflow	AG, RPBA, or RPDA
Low health cross-connection hazard	Backsiphonage or backpressure backflow	AG, RPBA, RPDA, DCVA, or DCDA

(b) Premises isolation requirements.

(i) For service connections with remises posing a high health cross-connection hazard including, but not limited to, those premises listed in Table 9, the purveyor shall ensure that an approved air gap or RPBA is installed for premises isolation.

(ii) If the purveyor's CCS determines that no hazard exists for a connection serving premises of the type listed in Table 9, the requirements of (b)(i) of this subsection do not apply.

(iii) The purveyor shall document, on a case-by-case basis, the reasons for not applying the requirements of (b)(i) of this subsection to a connection serving premises of the type listed in Table 9 and include such documentation in the cross-connection control program summary report required in subsection (8) of this section.

TABLE 9
HIGH HEALTH CROSS-CONNECTION HAZARD PREMISES
REQUIRING PREMISES ISOLATION BY AG OR RPBA

Agricultural (farms and dairies)
Beverage bottling plants
Car washes
Chemical plants
Commercial laundries and dry cleaners
Premises where both reclaimed water and potable water are provided
Film processing facilities
Food processing plants
Hospitals, medical centers, nursing homes, veterinary, medical and dental clinics, and blood plasma centers
Premises with separate irrigation systems using the purveyor's water supply and with chemical addition*
Laboratories
Metal plating industries
Mortuaries
Petroleum processing or storage plants
Piers and docks
Radioactive material processing plants or nuclear reactors*
Survey access denied or restricted
Wastewater lift stations and pumping stations
Wastewater treatment plants*
Premises with an unapproved auxiliary water supply interconnected with the potable water supply

+ For example, parks, playgrounds, golf courses, cemeteries, estates, etc.

[Title 246 WAC—p. 587]

* RPBA for connections serving these premises are acceptable only when used in combination with an in-plant approved air gap; otherwise, the purveyor shall require an approved air gap at the service connection.

(c) Backflow protection for single-family residences.

(i) For single-family residential service connections, the purveyor shall comply with the requirements of (b) of this subsection when applicable.

(ii) If the requirements of (b) of this subsection do not apply and the requirements specified in subsection (2)(h) of this section are met, the purveyor may rely on backflow protection provided at the point of hazard in accordance with WAC 51-46-0603 of the UPC for hazards such as, but not limited to:

- (A) Irrigation systems;
- (B) Swimming pools or spas;
- (C) Ponds; and
- (D) Boilers.

For example, the purveyor may accept an approved AVB on a residential irrigation system, if the AVB is properly installed in accordance with the UPC.

(d) Backflow protection for fire protection systems.

(i) Backflow protection is not required for residential flow-through or combination fire protection systems constructed of potable water piping and materials.

(ii) For service connections with fire protection systems other than flow-through or combination systems, the purveyor shall ensure that backflow protection consistent with WAC 51-46-0603 of the UPC is installed. The UPC requires minimum protection as follows:

(A) An RPBA or RPDA for fire protection systems with chemical addition or using unapproved auxiliary water supply; and

(B) A DCVA or DCDA for all other fire protection systems.

(iii) For new connections made on or after the effective date of these regulations, the purveyor shall ensure that backflow protection is installed before water service is provided.

(iv) For existing fire protection systems:

(A) With chemical addition or using unapproved auxiliary supplies, the purveyor shall ensure that backflow protection is installed within ninety days of the purveyor notifying the consumer of the high health cross-connection hazard or in accordance with an alternate schedule acceptable to the purveyor.

(B) Without chemical addition, without on-site storage, and using only the purveyor's water (i.e., no unapproved auxiliary supplies on or available to the premises), the purveyor shall ensure that backflow protection is installed in accordance with a schedule acceptable to the purveyor or at an earlier date if required by the agency administering the Uniform Building Code as adopted under chapter 19.27 RCW.

(C) When establishing backflow protection retrofitting schedules for fire protection systems that have the characteristics listed in (d)(iv)(B) of this subsection, the purveyor may consider factors such as, but not limited to, impacts of assembly installation on sprinkler performance, costs of retrofitting, and difficulty of assembly installation.

(e) Purveyors may require backflow preventers commensurate with the degree of hazard determined by the purveyor to be installed for premises isolation for connections

serving premises that have characteristics such as, but not limited to, the following:

(i) Complex plumbing arrangements or plumbing potentially subject to frequent changes that make it impracticable to assess whether cross-connection hazards exist;

(ii) A repeated history of cross-connections being established or reestablished; or

(iii) Cross-connection hazards are unavoidable or not correctable, such as, but not limited to, tall buildings.

(5) Approved backflow preventers.

(a) The purveyor shall ensure that all backflow prevention assemblies relied upon by the purveyor are models included on the current list of backflow prevention assemblies approved for use in Washington state. The current approved assemblies list is available from the department upon request.

(b) The purveyor may rely on testable backflow prevention assemblies that are not currently approved by the department, if the assemblies:

(i) Were included on the department and/or USC list of approved backflow prevention assemblies at the time of installation;

(ii) Have been properly maintained;

(iii) Are commensurate with the purveyor's assessed degree of hazard; and

(iv) Have been inspected and tested at least annually and have successfully passed the annual tests.

(c) The purveyor shall ensure that an unlisted backflow prevention assembly is replaced by an approved assembly commensurate with the degree of hazard, when the unlisted assembly:

(i) Does not meet the conditions specified in (b)(i) through (iv) of this subsection;

(ii) Is moved; or

(iii) Cannot be repaired using spare parts from the original manufacturer.

(d) The purveyor shall ensure that AVBs meet the definition of approved atmospheric vacuum breakers as described in WAC 246-290-010.

(6) Approved backflow preventer installation.

(a) The purveyor shall ensure that approved backflow preventers are installed in the orientation for which they are approved (if applicable).

(b) The purveyor shall ensure that approved backflow preventers are installed in a manner that:

(i) Facilitates their proper operation, maintenance, inspection, and/or in-line testing (as applicable) using standard installation procedures acceptable to the department such as those in the USC Manual or PNWS-AWWA Manual;

(ii) Ensures that the assembly will not become submerged due to weather-related conditions such as flooding; and

(iii) Ensures compliance with all applicable safety regulations.

(c) The purveyor shall ensure that approved backflow assemblies for premises isolation are installed at a location adjacent to the meter or property line or an alternate location acceptable to the purveyor.

(d) When premises isolation assemblies are installed at an alternate location acceptable to the purveyor, the purveyor

shall ensure that there are no connections between the point of delivery from the public water system and the approved backflow assembly, unless the installation of such a connection meets the purveyor's cross-connection control requirements and is specifically approved by the purveyor.

(e) The purveyor shall ensure that approved backflow preventers are installed in accordance with the following time frames:

(i) For new connections made on or after the effective date of these regulations, the following conditions shall be met before service is provided:

(A) The provisions of subsection (3)(d)(ii) of this section; and

(B) Satisfactory completion of a test by a BAT in accordance with subsection (7) of this section.

(ii) For existing connections where the purveyor identifies a high health cross-connection hazard, the provisions of (3)(d)(ii) of this section shall be met:

(A) Within ninety days of the purveyor notifying the consumer of the high health cross-connection hazard; or

(B) In accordance with an alternate schedule acceptable to the purveyor.

(iii) For existing connections where the purveyor identifies a low health cross-connection hazard, the provisions of subsection (3)(d)(ii) of this section shall be met in accordance with a schedule acceptable to the purveyor.

(f) The purveyor shall ensure that bypass piping installed around any approved backflow preventer is equipped with an approved backflow preventer that:

(i) Affords at least the same level of protection as the approved backflow preventer that is being bypassed; and

(ii) Complies with all applicable requirements of this section.

(7) Approved backflow preventer inspection and testing.

(a) The purveyor shall ensure that:

(i) A CCS inspects backflow preventer installations to ensure that protection is provided commensurate with the assessed degree of hazard;

(ii) Either a BAT or CCS inspects:

(A) Air gaps installed in lieu of approved backflow prevention assemblies for compliance with the approved air gap definition; and

(B) Backflow prevention assemblies for correct installation and approval status.

(iii) A BAT tests approved backflow prevention assemblies for proper operation.

(b) The purveyor shall ensure that inspections and/or tests of approved air gaps and approved backflow assemblies are conducted:

(i) At the time of installation;

(ii) Annually after installation, or more frequently, if required by the purveyor for connections serving premises or systems that pose a high health cross-connection hazard or for assemblies that repeatedly fail;

(iii) After a backflow incident; and

(iv) After an assembly is repaired, reinstalled, or relocated or an air gap is replumbed.

(c) The purveyor shall ensure that inspections of AVBs installed on irrigation systems are conducted:

(i) At the time of installation;

(ii) After a backflow incident; and

(iii) After repair, reinstallation, or relocation.

(d) The purveyor shall ensure that approved backflow prevention assemblies are tested using procedures acceptable to the department, such as those specified in the most recently published edition of the USC Manual. When circumstances, such as, but not limited to, configuration or location of the assembly, preclude the use of USC test procedures, the purveyor may allow, on a case-by-case basis, the use of alternate (non-USC) test procedures acceptable to the department.

(e) The purveyor shall ensure that results of backflow prevention assembly inspections and tests are documented and reported in a manner acceptable to the purveyor.

(f) The purveyor shall ensure that an approved backflow prevention assembly or AVB, whenever found to be improperly installed, defective, not commensurate with the degree of hazard, or failing a test (if applicable) is properly reinstalled, repaired, overhauled, or replaced.

(g) The purveyor shall ensure that an approved air gap, whenever found to be altered or improperly installed, is properly replumbed or, if commensurate with the degree of hazard, is replaced by an approved RPBA.

(8) Recordkeeping and reporting.

(a) Purveyors shall keep cross-connection control records for the following time frames:

(i) Records pertaining to the master list of service connections and/or consumer's premises required in subsection (3)(j)(i) of this section shall be kept as long as the premises pose a cross-connection hazard to the purveyor's distribution system;

(ii) Records regarding inventory information required in subsection (3)(j)(ii) of this section shall be kept for five years or for the life of the approved backflow preventer whichever is shorter; and

(iii) Records regarding backflow incidents and annual summary reports required in subsection (3)(j)(iii) of this section shall be kept for five years.

(b) Purveyors may maintain cross-connection control records in original form or transfer data to tabular summaries.

(c) Purveyors may maintain records or data in any media, such as paper, film, or electronic format.

(d) The purveyor shall complete the cross-connection control program summary report annually. Report forms and guidance on completing the report are available from the department.

(e) The purveyor shall make all records and reports required in subsection (3)(j) of this section available to the department or its representative upon request.

(f) The purveyor shall notify the department, local administrative authority, and local health jurisdiction as soon as possible, but no later than the end of the next business day, when a backflow incident is known by the purveyor to have:

(i) Contaminated the public water system; or

(ii) Occurred within the premises of a consumer served by the purveyor.

(g) The purveyor shall:

(i) Document details of backflow incidents on a form acceptable to the department such as the backflow incident report form included in the most recent edition of the PNWS-AWWA Manual; and

(ii) Include all backflow incident report(s) in the annual cross-connection program summary report referenced in (d) of this subsection, unless otherwise requested by the department.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-490, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-290-490, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339, 89-21-020 (Order 336), § 248-54-285, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045, 88-05-057 (Order 307), § 248-54-285, filed 2/17/88. Statutory Authority: RCW 43.20.050, 83-19-002 (Order 266), § 248-54-285, filed 9/8/83.]

WAC 246-290-495 Public notification. (1) Required notification. The purveyor shall notify the water system users when the system:

(a) Has an MCL violation of a primary standard as described under WAC 246-290-310;

(b) Fails to comply with:

(i) Treatment technique requirements under Part 6 of this chapter or 40 CFR 141.80(d);

(ii) Monitoring requirements under WAC 246-290-300, 246-290-664, 246-290-674, or 246-290-694;

(iii) Analytical requirements of WAC 246-290-638 or chapter 246-390 WAC;

(iv) A departmental order; or

(v) A variance or exemption schedule prescribed by the state board of health;

(c) Is identified as a source of waterborne disease outbreak as determined by the department;

(d) Is issued a category red operating permit;

(e) Is issued a departmental order; or

(f) Is operating under a variance or exemption.

(2) Content. Notices shall provide:

(a) A clear, concise, and simple explanation of the violation;

(b) Discussion of potential adverse health effects and any segments of the population that may be at higher risk;

(c) Mandatory health effects information in accordance with subsection (4) of this section;

(d) A list of steps the purveyor has taken or is planning to take to remedy the situation;

(e) A list of steps the consumer should take, including advice on seeking an alternative water supply if necessary;

(f) The purveyor's name and phone number; and

(g) When appropriate, notices shall be bilingual or multilingual.

The purveyor may provide additional information to further explain the situation.

(3) Distribution.

(a) Purveyors of community and NTNC systems with violations of a primary MCL, treatment technique, or variance or exemption schedule shall provide:

(i) Newspaper notice to water system users as defined in (e) of this subsection, within fourteen days of violation;

(ii) Direct mail notice or hand delivery to all consumers served by the system within forty-five days of the violation. The department may waive the purveyor's mail or hand delivery if the violation is corrected within forty-five days. The waiver shall be in writing and made within the forty-five day period;

(iii) Notice to radio and television stations serving the area within seventy-two hours of violation of an acute coliform MCL under WAC 246-290-310 (2)(c), a nitrate MCL under WAC 246-290-310(3), occurrence of a waterborne disease outbreak or other acute violation as determined by the department; and

(iv) Repeat mail or hand delivery every three months until the violation is corrected.

(b) Purveyors of community and NTNC systems shall provide newspaper notice as defined in (e) of this subsection, to water system users within three months of the following:

(i) Violation of a monitoring requirement or testing procedure;

(ii) Receipt of a departmental order;

(iii) Receipt of a category red operating permit; or

(iv) Granting of a variance or exemption.

Purveyors shall also provide repeat notice by mail or hand delivery to all consumers served by the system every three months until the situation is corrected or for as long as the variance or exemption remains in effect.

(c) Purveyors of TNC systems shall post a notice or notify consumers by other methods authorized by the department within fourteen days of the following:

(i) Violation of a primary MCL;

(ii) Violation of a treatment technique requirement; or

(iii) Violation of a variance or exemption schedule. If the violation is acute, the department shall require posting within seventy-two hours.

(d) Purveyors of TNC systems shall post a notice or notify consumers by other methods authorized by the department within three months of the following:

(i) Violation of a monitoring requirement or testing procedure;

(ii) Receipt of a category red operating permit; or

(iii) Granting of a variance or exemption.

(e) "Newspaper notice," as used in this section, means publication in a daily newspaper of general circulation or in a weekly newspaper of general circulation if a daily newspaper does not serve the area. The purveyor may substitute a community or homeowner's association newsletter or similar periodical publication if the newsletter reaches all affected consumers within the specified time.

(f) The purveyor shall substitute a posted notice in the absence of a newspaper of general circulation or homeowner's association newsletter or similar periodical publication. The purveyor shall post the notice within the time frame specified in this subsection.

(g) The purveyor shall place posted notices in conspicuous locations and present the notices in a manner making them easy to read. Notices shall remain posted until the violation is corrected or for as long as the variance or exemption remains in effect.

(h) The purveyor of a community or NTNC water system shall give a copy of the most recent public notice for all outstanding violations to all new billing units or new hookups before or at the time water service begins.

(i) The purveyor shall provide the department with a copy of the public notification at the time the purveyor notifies the public.

(4) Mandatory language.

(a) The purveyor shall provide specific health effects language in the notice when a violation involves:

(i) A violation of a primary organic or inorganic chemical or physical MCL;

(ii) A violation of a secondary fluoride MCL;

(iii) A violation of an acute coliform MCL;

(iv) A violation of a nonacute coliform MCL;

(v) A treatment technique requirement;

(vi) Granting or continuation of exemption or variance;

or

(vii) Failure to comply with a variance or exemption schedule.

(b) The purveyor shall provide specific mandatory language in its notification when the purveyor receives a category red operating permit.

(c) Required specific language is contained in department guidance.

(5) Procedure for notification of organic chemical and unregulated chemical sample results.

(a) Availability of results. After receipt of the first analysis results, the purveyor of a community or NTNC water system shall notify persons served by the system of the availability of the results and shall supply the name and telephone number of a contact person. Purveyors with surface water sources shall include a statement that additional monitoring will be conducted for three more quarters.

(i) The purveyor shall initiate notification within three months of the purveyors receipt of the first analysis results. This notification is only required one time.

(ii) Notification shall occur by any of the following methods:

(A) Inclusion in the first set of water bills issued after receipt of the results;

(B) Newspaper notice that shall run at least one day each month for three consecutive months;

(C) Direct mail;

(D) Posting for at least one week if an NTNC system; or

(E) Any other method approved by the department.

(iii) Within three months of receipt of analysis results, purveyors selling water to other public water systems shall provide copies of the analysis results to the purchasing system.

(iv) Within thirty days of receipt of analysis results, purveyors purchasing water shall make results available to their consumers. The purveyor's notification shall occur by the method outlined under (a)(ii) of this subsection.

(b) Consumer information.

(i) The purveyor shall provide consumer information within twenty-one days of receipt of confirmation sample results when:

(A) A regulated chemical is confirmed at a concentration greater than an MCL, and the level will not cause the running annual average to exceed the MCL; or

(B) The department determines that an unregulated chemical is confirmed at a level greater than a SAL.

(ii) Consumer information shall include:

(A) Name and level of chemical detected;

(B) Location where the chemical was detected;

(C) Any health effects that the chemical could cause at its present concentration;

(D) Plans for follow-up activities; and

(E) Phone number to call for further information.

(iii) Consumer information shall be distributed by any of the following methods:

(A) Notice placed in the major newspaper in the affected area;

(B) Direct mail to consumers;

(C) Posting for at least one week if an NTNC system; or

(D) Any other method approved by the department.

(6) Fluoride notification procedure.

When a primary or secondary MCL violation occurs or a variance or exemption is issued or a variance or exemption schedule is violated, the purveyor of a community water system shall send notice, including mandatory language, to:

(a) The department annually;

(b) Water system users annually; and

(c) New billing units added while the violation exists.

(7) When circumstances dictate the purveyor give a broader or more immediate notice to protect public health, the department may require the purveyor's notification by whatever means necessary.

(8) When the state board of health grants a public water system a waiver, the purveyor shall notify consumers and new billing units or new hookups before water service begins. The purveyor shall provide a notice annually and send a copy to the department.

(9) The department may give notice to the water system users as required by this section on behalf of the water purveyor. However, the purveyor remains responsible for ensuring the department's requirements are met.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-495, filed 3/9/99, effective 4/9/99.]

WAC 246-290-500 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected.

[Statutory Authority: RCW 43.20.050, 91-02-051 (Order 124B), recodified as § 246-290-500, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 34.04.045, 88-05-057 (Order 307), § 248-54-291, filed 2/17/88.]

PART 6.

SURFACE WATER TREATMENT

Subpart A - Introduction and General Requirements

WAC 246-290-601 Purpose of surface water treatment. (1) Part 6 of chapter 246-290 WAC establishes filtration and disinfection as treatment technique requirements for water systems using surface or GWI sources. The Part 6 treatment technique requirements are established in lieu of maximum contaminant levels (MCLs) for the following contaminants:

(a) *Giardia lamblia*;

(b) Viruses;

(c) Heterotrophic plate count bacteria;

(d) *Legionella*; and

(e) Turbidity.

(2) For water systems using unfiltered surface sources, in whole or part, and that have been required to install, but have yet to complete the installation and operation of, filtration facilities, the turbidity levels at entry points to distribution and sampling/analytical requirements shall be in accordance with 40 CFR 141.13 and 40 CFR 141.22, respectively.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-601, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-601, filed 3/25/93, effective 4/25/93.]

WAC 246-290-620 Applicability of surface water treatment requirements. (1) The requirements of Part 6 of this chapter apply to water systems that:

(a) Use surface sources or ground water sources under the direct influence of surface water (GWI); or

(b) Purchase surface or GWI water from an approved public water system or other entity acceptable to the department.

(2) The requirements of Part 6 of this chapter do not apply to water systems that use unfiltered surface or GWI sources as emergency sources, provided the source is physically disconnected from the system at all times until it is needed, and the purveyor meets the following conditions:

(a) Has a department-approved emergency response plan; and

(b) Provides disinfection treatment that meets the requirements under WAC 246-290-662 (2) (d).

(3) The requirements of WAC 246-290-640 apply to **Group A** systems that use sources potentially under the influence of surface water as determined by the department.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-620, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-620, filed 3/25/93, effective 4/25/93.]

WAC 246-290-630 General requirements. (1) The purveyor shall ensure that treatment is provided for surface and GWI sources consistent with the treatment technique requirements specified in Part 6 of chapter 246-290 WAC.

(2) The purveyor shall install and properly operate water treatment processes to ensure at least:

(a) 99.9 percent (3 log) removal and/or inactivation of *Giardia lamblia* cysts; and

(b) 99.99 percent (4 log) removal and/or inactivation of viruses.

(3) The purveyor shall ensure that the requirements of subsection (2) of this section are met between a point where the source water is not subject to contamination by untreated surface water and a point at or before the first consumer.

(4) The department may require higher levels of removal and/or inactivation of *Giardia lamblia* cysts and viruses than specified in subsection (2) of this section if deemed necessary to protect the health of consumers served by the system.

(5) The purveyor shall ensure that personnel operating a system subject to Part 6 of chapter 246-290 WAC meet the requirements under chapter 70.119 RCW and chapter 246-292 WAC.

(6) The purveyor of a **Group A community** system serving water from a surface or GWI source to the public before January 1, 1991, shall comply with applicable minimum treatment requirements. The purveyor shall meet either:

(a) The filtration and disinfection requirements under WAC 246-290-660 and 246-290-662 respectively;

(b) The criteria to remain unfiltered under WAC 246-290-690 and the disinfection requirements under WAC 246-290-692; or

(c) The criteria to provide a limited alternative to filtration under WAC 246-290-691 and the disinfection requirements under WAC 246-290-692.

(7) The purveyor of a **Group A noncommunity** system serving water from a surface or GWI source, shall meet either:

(a) The filtration and disinfection requirements under WAC 246-290-660 and 246-290-662, respectively; or

(b) The criteria to provide a limited alternative to filtration under WAC 246-290-691 and the disinfection requirements under WAC 246-290-692.

(8) The purveyor of a **Group A** system first serving water from a surface or GWI source to the public after December 31, 1990, shall meet either:

(a) The filtration and disinfection requirements under WAC 246-290-660 and 246-290-662, respectively; or

(b) The criteria to provide a limited alternative to filtration under WAC 246-290-691 and the disinfection requirements under WAC 246-290-692.

(9) The purveyor of a system required to install filtration may choose to provide a limited alternative to filtration or abandon the surface or GWI source as a permanent or seasonal source and develop an alternate, department-approved source. Purveyors that develop alternate ground water sources or purchase water from a department-approved public water system using a ground water source shall no longer be subject to Part 6 of chapter 246-290 WAC, once the alternate source is approved by the department and is on line.

(10) A purveyor that chooses to provide a limited alternative to filtration shall submit an application to the department that contains the information necessary to determine whether the source can meet the criteria.

(11) If a limited alternative to filtration is provided, then the purveyor shall install and properly operate treatment processes to ensure greater removal and/or inactivation efficiencies of *Giardia lamblia* cysts, viruses, or other pathogenic organisms of public health concern than would be achieved by the combination of filtration and chlorine disinfection.

[Statutory Authority: RCW 43.20.050. 99-07-021 and 99-10-076, § 246-290-630, filed 3/9/99 and 5/4/99, effective 4/9/99 and 6/4/99; 93-08-011 (Order 352B), § 246-290-630, filed 3/25/93, effective 4/25/93.]

WAC 246-290-632 Treatment technique violations.

(1) A treatment technique violation shall be considered a violation of a primary drinking water standard and in the case of an unfiltered system, may result in the purveyor of an unfiltered system being required to install filtration.

(2) A treatment technique violation occurs when a system using a surface or GWI source is identified by the department as the source of a waterborne disease outbreak or any of the following occur as applicable:

(a) The purveyor providing filtration delivers unfiltered water or fails to meet one or more of the following requirements:

(i) Filtration treatment in accordance with WAC 246-290-660; or

(ii) Disinfection treatment in accordance with WAC 246-290-662.

(b) The purveyor required to install filtration:

(i) Fails to meet the interim disinfection requirements in accordance with WAC 246-290-672 or as otherwise directed by the department; or

(ii) Fails to install filtration or develop an alternate source by the applicable time lines specified in WAC 246-290-670.

(c) The purveyor of an unfiltered surface water, or GWI source, meeting the criteria to remain unfiltered:

(i) Delivers water with a turbidity level exceeding 5.0 NTU measured at a point immediately prior to the point of primary disinfection; or

(ii) Fails to meet one or more of the disinfection requirements in accordance with WAC 246-290-692 after the dates specified in WAC 246-290-686.

(d) The purveyor of an unfiltered source meeting the criteria to provide a limited alternative to filtration:

(i) Delivers water with a turbidity level exceeding 5.0 NTU measured at a point immediately prior to the point of primary disinfection; or

(ii) Fails to meet one or more of the disinfection requirements in accordance with WAC 246-290-692.

(e) A purveyor supplies water from an unfiltered source that has not been previously approved by the department.

(f) A purveyor of a department approved unfiltered source that fails to meet the on-going criteria to remain unfiltered:

(i) Delivers water with a turbidity level exceeding 5.0 NTU measured at a point immediately prior to the point of primary disinfection; or

(ii) Fails to meet one or more of the disinfection requirements in accordance with WAC 246-290-692.

(g) A purveyor of a department approved unfiltered source that has failed to meet the criteria to provide a limited alternative to filtration:

(i) Delivers water with a turbidity level exceeding 5.0 NTU measured at a point immediately prior to the point of primary disinfection; or

(ii) Fails to meet one or more of the disinfection requirements in accordance with WAC 246-290-692.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-632, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-632, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-632, filed 3/25/93, effective 4/25/93.]

WAC 246-290-634 Follow-up to treatment technique violations. When a treatment technique violation occurs, the purveyor:

(1) Shall report to the department in accordance with:

(a) WAC 246-290-666 for purveyors providing filtration or required to filter;

(b) WAC 246-290-674 for purveyors installing filtration; or

(c) WAC 246-290-696 for purveyors meeting the criteria to remain unfiltered or providing a limited alternative to filtration;

(2003 Ed.)

(2) Shall notify the public in accordance with WAC 246-290-495;

(3) Shall determine the cause of the violation;

(4) Shall take action as directed by the department; and

(5) May be subject to enforcement under WAC 246-290-050.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-634, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-634, filed 3/25/93, effective 4/25/93.]

WAC 246-290-636 Determination of disinfectant contact time (T). (1) The purveyor shall calculate T at peak hourly flow for each surface or GWI source.

(2) For pipelines, the purveyor shall calculate T by dividing the internal volume of the pipe by the peak hourly flow rate through that pipe.

(3) For all other system components used for inactivation of *Giardia lamblia* cysts, viruses, and other microorganisms of public health concern, the purveyor shall use tracer studies or empirical methods to determine T.

(4) The purveyor shall use the T10 value determined by tracer studies or other methods acceptable to the department as T in all CT calculations.

(5) Tracer studies.

(a) The purveyor shall conduct field tracer studies on all system components with configurations (geometry and/or baffling) for which analogous contact times are not documented.

(b) Before conducting tracer studies, the purveyor shall obtain the department's approval of a tracer study plan. The plan shall identify at a minimum:

(i) How the purveyor will conduct the study;

(ii) The tracer material to be used;

(iii) Flow rates to be used; and

(iv) The names, titles, and qualifications of the persons conducting the study.

(c) A professional engineer registered in the state of Washington shall direct the conduct of all tracer studies.

(d) Tracer studies shall be conducted in accordance with good engineering practices using methods acceptable to the department such as those described in department guidance on surface water treatment.

(e) The department may require the purveyor to conduct additional tracer studies when:

(i) Modifications impacting flow distribution or T are made; or

(ii) Increases in flow exceed the conditions of the previous tracer studies.

(6) Empirical methods.

(a) Empirical methods may be used to calculate T10, if the purveyor demonstrates to the department's satisfaction that system components have configurations analogous to components on which tracer studies have been conducted and results have been documented.

(b) The purveyor shall submit to the department for review and approval engineering justification for determining T10 using empirical methods. As-built drawings of system components in their current configurations shall be submitted with the engineering justification.

[Title 246 WAC—p. 593]

(c) A professional engineer registered in the state of Washington shall prepare the engineering justification for determining T10 using empirical methods.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-636, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-636, filed 3/25/93, effective 4/25/93.]

WAC 246-290-638 Analytical requirements. (1) The purveyor shall ensure that only qualified persons conduct measurements for pH, temperature, turbidity, and residual disinfectant concentrations. In this section, qualified shall mean:

(a) A person certified under chapter 246-292 WAC;

(b) An analyst, with experience conducting these measurements, from the state public health laboratory or another laboratory certified by the department; or

(c) A state or local health agency professional experienced in conducting these measurements.

(2) The purveyor shall ensure that measurements for temperature, turbidity, pH, and residual disinfectant concentration are made in accordance with "standard methods."

(3) The purveyor shall ensure that samples for coliform and HPC analysis are:

(a) Collected and transported in accordance with department-approved methods; and

(b) Submitted to the state public health laboratory or another laboratory certified by the department to conduct such analyses.

(4) Turbidity monitoring.

(a) The purveyor shall equip the system's water treatment facility laboratory with a:

(i) Bench model turbidimeter; and

(ii) Continuous turbidimeter and recorder if required under WAC 246-290-664 or 246-290-694.

(b) The purveyor shall ensure that bench model and continuous turbidimeters are:

(i) Designed to meet the criteria in "standard methods"; and

(ii) Properly operated, calibrated, and maintained at all times in accordance with the manufacturer's recommendations.

(c) The purveyor shall validate continuous turbidity measurements for accuracy as follows:

(i) Calibrate turbidity equipment based upon a primary standard in the expected range of measurements; and

(ii) Verify continuous turbidimeter performance on a weekly basis, not on consecutive days, with grab sample measurements made using a properly calibrated bench model turbidimeter.

(d) When continuous turbidity monitoring equipment fails, the purveyor shall measure turbidity on grab samples collected at least every four hours while the system serves water to the public and the equipment is being repaired or replaced. The purveyor shall have continuous monitoring equipment on-line within five working days of failure.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-638, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-638, filed 3/25/93, effective 4/25/93.]

WAC 246-290-639 SWTR records. (1) Purveyors using surface or GWI sources shall maintain accurate and complete operations records.

(2) Operations records shall include, but not be limited to, the following as applicable:

(a) Results of all monitoring conducted under Part 6 of chapter 246-290 WAC;

(b) Quantity of water produced, plant flow rates, and hours of operation;

(c) Types and quantities of chemicals used;

(d) Dates and information pertaining to filter and/or disinfection system maintenance;

(e) Dates and results of filter and/or disinfection system inspections including records of filtration and backwash rates; and

(f) Dates and descriptions of major equipment and/or treatment process failures and corrective actions taken.

(3) Operations records not reported to the department under WAC 246-290-666 or 246-290-696 shall be maintained at the purveyor's treatment facility.

[Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-639, filed 3/25/93, effective 4/25/93.]

WAC 246-290-640 Determination of GWI sources.

(1) Until the department has made a source GWI determination, the purveyor shall monitor in accordance with the requirements for ground water sources in WAC 246-290-300 or as directed by the department and provide follow-up in accordance with WAC 246-290-320.

(2) The purveyor, after being notified by the department that one or more of the system sources have been classified as potential GWI, may elect to seek approval from the department to modify the potential GWI source to mitigate surface water influences prior to compliance with subsection (3) of this section, and if so, shall:

(a) Complete a project report, for departmental approval, that describes the proposed source-related modifications, including the schedule for their completion and an explanation of why the source should be reclassified upon completion of the source modifications; and

(b) Demonstrate compliance, if directed by the department, with the requirements of subsection (3) of this section upon completion of the source-related modifications.

(3) The purveyor using a source identified as a potential GWI shall provide to the department all information necessary to determine whether the source is under direct surface water influence. Information shall include, but not be limited to:

(a) Site-specific source water quality data, including temperature, conductivity, and/or other appropriate parameters as determined by the department;

(b) Documentation of source construction characteristics;

(c) Documentation of hydrogeology;

(d) Distance to surface water; and

(e) Water quality results from nearby surface water(s), including temperature, conductivity, and/or other appropriate parameters as determined by the department.

(4) Upon a determination by the department that one or more potential GWI source(s) being used are in hydraulic connection to a surface water, the purveyor shall:

- (a) Secure the services of a professional engineer to direct further evaluation and actions regarding the source;
- (b) Provide disinfection treatment of the source in accordance with WAC 246-290-451; and
- (c) Provide microscopic particulate analyses (MPA) results for review by the department based upon a sampling plan approved by the department.

(5) A purveyor notified by the department that one or more GWI sources are in use shall:

- (a) Within ninety days of notification submit a project report to the department that includes an implementation schedule for compliance with the treatment techniques specified in Part 6 of this chapter;
- (b) Notify consumers served by the system; and
- (c) Comply with the applicable requirements of WAC 246-290-670.

(6) After completion of the requirements in subsection (3) of this section, the purveyor may modify a GWI source to mitigate direct surface influence. In such cases, the purveyor shall:

(a) Include in a project report, for submittal to the department for approval, a description of the proposed approaches and schedule for source modification; and

(b) Comply again with subsection (3) of this section upon completion of source modifications to be considered for source reclassification.

(7) The department may reevaluate a ground water source for direct surface influence, if conditions impacting source classification have changed.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-640, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-640, filed 3/25/93, effective 4/25/93.]

Subpart B - Requirements for Filtered Systems

WAC 246-290-650 Compliance requirements for filtered systems. (1) In addition to the requirements of Parts 1 through 5 of chapter 246-290 WAC, Subpart B of Part 6 of chapter 246-290 WAC applies to purveyors of systems using surface or GWI sources and providing filtration, including:

- (a) Systems with water treatment facilities that produced water served to the public before January 1, 1991;
- (b) Unfiltered systems installing filtration, once the new water treatment facilities are on-line; and

(c) New systems using surface or GWI sources. For the purpose of the Part 6 chapter 246-290 WAC requirements, new systems are defined as systems first serving water to the public after December 31, 1990.

(2) The purveyor of a new system using a surface or GWI source shall comply with the requirements of Part 6 subparts A and B chapter 246-290 WAC and be subject to the treatment technique violations specified in WAC 246-290-632 beginning when the system first serves water to the public and thereafter.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-650, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-650, filed 3/25/93, effective 4/25/93.]

WAC 246-290-652 Filtration technology and design criteria for existing filtered systems. (1) The purveyor shall treat all surface and GWI sources using one of the following filtration technologies unless another technology is acceptable to the department:

- (a) Conventional;
- (b) Direct;
- (c) Diatomaceous earth; or
- (d) Slow sand.

(2) Purveyors not using one of the filtration technologies in subsection (1) of this section or not complying with the design criteria specified in WAC 246-290-676 shall submit a project report to the department that demonstrates to the department's satisfaction that the existing water treatment facility can be operated to reliably produce, by June 29, 1993, water meeting the operating and performance requirements of WAC 246-290-654 and 246-290-660, respectively. The project report shall comply with the requirements of WAC 246-290-110.

(3) The purveyor shall make the demonstration required under subsection (2) of this section using the latest twelve months of operating data, results of special studies conducted to test the performance of the water treatment facility under adverse water quality conditions or other means acceptable to the department.

(4) For water treatment facilities currently unable to meet the performance and operation requirements, the project report shall specify the modifications needed to upgrade the facility. Purveyors upgrading existing water treatment facilities shall comply with the design and reliability requirements under WAC 246-290-676 and 246-290-678, respectively.

(5) The purveyor of a new system using a surface or GWI source shall be subject to the:

- (a) Design and reliability requirements under WAC 246-290-676 and 246-290-678, respectively; and
- (b) Operating criteria for new water treatment facilities under WAC 246-290-654.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-652, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-652, filed 3/25/93, effective 4/25/93.]

WAC 246-290-654 Treatment criteria for filtered systems. (1) The purveyor shall operate filters such that maximum flow rates do not exceed those specified in Table 10. The purveyor may operate filters at higher flow rates, if the purveyor demonstrates to the department's satisfaction that filtration at the higher rate consistently achieves at least 99 percent (2 log) removal of *Giardia lamblia* cysts and meets the turbidity performance requirements of Table 11.

Table 10
FILTRATION OPERATION CRITERIA

FILTRATION TECHNOLOGY/MEDIA	MAXIMUM FILTRATION RATE (gpm/ft ³)
Conventional, Direct and In-Line	
Gravity Filters with Single Media	3
Gravity Filters with Deep Bed, Dual or Mixed Media	6
Pressure Filters with Single Media	2
Pressure Filters with Deep Bed, Dual or Mixed Media	3
Slow Sand	0.1
Diatomaceous Earth	1.0

(2) The purveyor using conventional, direct or in-line filtration shall ensure that effective coagulation is in use at all times the water treatment facility produces water served to the public.

(3) The purveyor using conventional, direct, or in-line filtration shall demonstrate treatment effectiveness for *Giardia lamblia* cyst removal by one of the following methods:

(a) Turbidity reduction method where source and filtered water turbidity measurements are made in accordance with WAC 246-290-664 (2) and (3) respectively:

(i) When source turbidity is greater than or equal to 2.5 NTU, the purveyor shall achieve the turbidity performance requirements specified in WAC 246-290-660(1); or

(ii) When source turbidity is less than 2.5 NTU, the purveyor shall achieve:

(A) An eighty percent reduction in source turbidity based on an average of the daily turbidity reductions measured in a calendar month; or

(B) An average daily filtered water turbidity less than or equal to 0.1 NTU.

(b) Particle counting method. The purveyor shall:

(i) Use a particle counting protocol acceptable to the department; and

(ii) Demonstrate at a frequency acceptable to the department at least the following log reduction of particles in the size range of five to fifteen microns (*Giardia lamblia* cyst-sized particles) as applicable:

(A) 2.5 log reduction for systems using conventional filtration; or

(B) 2.0 log reduction for systems using direct or in-line filtration.

(c) Microscopic particulate analysis method. The purveyor shall:

(i) Use a protocol acceptable to the department; and

(ii) Demonstrate at a frequency acceptable to the department at least the following log reduction of *Giardia lamblia* cysts and/or *Giardia lamblia* cyst surrogate indicators as applicable:

(A) 2.5 log reduction for systems using conventional filtration; and

(B) 2.0 log reduction for systems using direct or in-line filtration.

(d) Other methods acceptable to the department.

(4) The purveyor shall ensure continuous disinfection of all water delivered to the public and shall:

(a) Maintain an adequate supply of disinfection chemicals and keep back-up system components and spare parts on hand;

(b) Develop, maintain, and post at the water treatment facility a plan detailing:

(i) How water delivered to the public will be continuously and adequately disinfected; and

(ii) The elements of an emergency notification plan to be implemented whenever the residual disinfectant concentration at entry to distribution falls below 0.2 mg/L for more than one hour.

(c) Implement such plan during an emergency affecting disinfection.

(5) Operations program.

(a) For each water treatment facility treating a surface or GWI source, the purveyor shall develop an operations program and make it available to the department for review upon request.

(b) The program shall be submitted to the department as an addendum to the purveyor's water system plan (WAC 246-290-100) or small water system management program (WAC 246-290-105).

(c) The program shall detail how the purveyor will produce optimal filtered water quality at all times the water treatment facility produces water to be served to the public.

(d) The purveyor shall operate the water treatment facility in accordance with the operations program.

(e) The operations program shall include, but not be limited to, a description of:

(i) For conventional, direct or in-line filtration, procedures used to determine and maintain optimized coagulation as demonstrated by meeting the requirements of WAC 246-290-654(3);

(ii) Procedures used to determine chemical dose rates;

(iii) How and when each unit process is operated;

(iv) Unit process equipment maintenance program;

(v) Treatment plant performance monitoring program;

(vi) Laboratory procedures;

(vii) Records;

(viii) Reliability features; and

(ix) Response plans for water treatment facility emergencies, including disinfection failure and watershed emergencies.

(f) The purveyor shall ensure the operations program is:

(i) Readily available at the water treatment facility for use by operators and for department inspection;

(ii) Consistent with department guidelines for operations procedures such as those described in department guidance on surface water treatment and water system planning; and

(iii) Updated as needed to reflect current water treatment facility operations.

(6) Pressure filters. Purveyors using pressure filters shall:

(a) Inspect and evaluate the filters, at least every six months, for conditions that would reduce their effectiveness in removing *Giardia lamblia* cysts;

(b) Maintain, and make available for department review, a written record of pressure filter inspections; and

(c) Be prepared to conduct filter inspections in the presence of a department representative, if requested.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-654, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-654, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-654, filed 3/25/93, effective 4/25/93.]

WAC 246-290-660 Filtration. (1) Turbidity performance requirements.

(a) The purveyor shall ensure that the turbidity level of representative filtered water samples:

(i) Complies with the performance standards in Table 11; and

(ii) Never exceeds 5.0 NTU.

Table 11
TURBIDITY PERFORMANCE REQUIREMENTS

Filtration Technology	Filtered water turbidity (in NTUs) shall be less than or equal to this value in at least 95% of the measurements made each calendar month
Conventional, Direct and In-line	0.50
Slow Sand	1.0
Diatomaceous Earth	1.0
Alternate Technology	as determined by the department

(b) The department may allow the turbidity of filtered water from a system using slow sand filtration to exceed 1.0 NTU, but never 5.0 NTU, if the system demonstrates to the department's satisfaction that the higher turbidity level will not endanger the health of consumers served by the system. As a condition of being allowed to produce filtered water with a turbidity exceeding 1.0 NTU, the purveyor may be required to monitor one or more parameters in addition to the parameters specified under WAC 246-290-664. The department shall notify the purveyor of the type and frequency of monitoring to be conducted.

(2) *Giardia lamblia* and virus removal credit.

(a) The department shall notify the purveyor of the removal credit granted for the system's filtration process. The department shall specify removal credit for:

(i) Existing filtration facilities based on periodic evaluations of performance and operation; and

(ii) New or modified filtration facilities based on results of pilot plant studies or full scale operation.

(b) Conventional, direct, and in-line filtration.

(i) The removal credit the department may grant to a system using conventional, direct, or in-line filtration and demonstrating effective treatment is as follows:

Filtration Technology	Percent Removal Credit (log)	
	<i>Giardia</i>	Virus
Conventional	99.7 (2.5)	99 (2.0)
Direct and in-line	99 (2.0)	90 (1.0)

(ii) A system using conventional, direct, or in-line filtration shall be considered to provide effective treatment, if the purveyor demonstrates to the satisfaction of the department that the system meets the:

(A) Turbidity performance requirements under subsection (1) of this section; and

(B) Operations requirements of WAC 246-290-654.

(iii) The department may grant a higher level of *Giardia lamblia* and virus removal credit than listed under (b)(i) of this subsection, if the purveyor demonstrates to the department's satisfaction that the higher level can be consistently achieved.

(iv) As a condition of maintaining the maximum removal credit, purveyors may be required to periodically monitor one or more parameters not routinely monitored under WAC 246-290-664. The department shall notify the purveyor of the type and frequency of monitoring to be conducted.

(v) The department shall not grant removal credit to a system using conventional, direct, or in-line filtration that:

(A) Fails to meet the minimum turbidity performance requirements under subsection (1) of this section; or

(B) Fails to meet the operating requirements under WAC 246-290-654.

(c) Slow sand filtration.

The department may grant a system using slow sand filtration 99 percent (2 log) *Giardia lamblia* cyst removal credit and 99 percent (2 log) virus removal credit, if the system meets the department design requirements under WAC 246-290-676 and meets the minimum turbidity performance requirements in subsection (1) of this section.

(d) Diatomaceous earth filtration.

The department may grant a system using diatomaceous earth filtration 99 percent (2 log) *Giardia lamblia* cyst removal credit and 90 percent (1 log) virus removal credit, if the system meets the department design requirements under WAC 246-290-676 and meets the minimum turbidity performance requirements in subsection (1) of this section.

(e) Alternate filtration technology.

The department shall grant, on a case-by-case basis, *Giardia lamblia* cyst and virus removal credit for systems using alternate filtration technology based on results of product testing acceptable to the department.

(f) The purveyor granted no removal credit shall:

(i) Provide treatment in accordance with WAC 246-290-662 (2) (d); and

(ii) Within ninety days of department notification regarding removal credit, submit an action plan to the department for review and approval. The plan shall:

(A) Detail how the purveyor plans to comply with the turbidity performance requirements in subsection (1) of this section and operating requirements of WAC 246-290-654; and

(B) Identify the proposed schedule for implementation.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-660, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-660, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-660, filed 3/25/93, effective 4/25/93.]

WAC 246-290-662 Disinfection for filtered systems.

(1) General requirements.

(a) The purveyor shall provide continuous disinfection to ensure that filtration and disinfection together achieve, at all times the system serves water to the public, at least the following:

(i) 99.9 percent (3 log) inactivation and removal of *Giardia lamblia* cysts; and

(ii) 99.99 percent (4 log) inactivation and/or removal of viruses.

(b) Where sources receive sewage discharges and/or agricultural runoff, purveyors may be required to provide greater levels of removal and inactivation of *Giardia lamblia* cysts and viruses to protect the health of consumers served by the system.

(c) Regardless of the removal credit granted for filtration, purveyors shall, at a minimum, provide continuous disinfection to achieve at least 68 percent (0.5 log) inactivation of *Giardia lamblia* cysts and 99 percent (2 log) inactivation of viruses.

(2) Establishing the level of inactivation.

(a) The department shall establish the level of disinfection (log inactivation) to be provided by the purveyor.

(b) The required level of inactivation shall be based on source quality and expected levels of *Giardia lamblia* cyst and virus removal achieved by the system's filtration process.

(c) Based on periodic reviews, the department may adjust, as necessary, the level of disinfection the purveyor shall provide to protect the health of consumers served by the system.

(d) Systems granted no *Giardia lamblia* cyst removal credit.

(i) Unless directed otherwise by the department, the purveyor of a system granted no *Giardia lamblia* cyst removal credit shall provide interim disinfection:

(A) To ensure compliance with the monthly coliform MCL under WAC 246-290-310;

(B) Achieve at least 99.9 percent (3 log) inactivation of *Giardia lamblia* cysts; and

(C) Maintain a detectable residual disinfectant concentration, or an HPC level less than 500 organisms/ml, within the distribution system in accordance with subsection (6) of this section.

(ii) The purveyor shall comply with the interim disinfection requirements until the system can demonstrate to the department's satisfaction that it complies with the operating requirements and turbidity performance requirements under WAC 246-290-654 and 246-290-660(1), respectively.

(3) Determining the level of inactivation.

(a) Unless the department has approved a reduced CT monitoring schedule for the system, each day the system serves water to the public, the purveyor, using procedures and CT values acceptable to the department such as those presented in department guidance of surface water treatment, shall determine:

(i) CT_{calc} values using the system's treatment parameters and calculate the total inactivation ratio achieved by disinfection; and

(ii) Whether the system's disinfection process is achieving the minimum levels of inactivation of *Giardia lamblia* cysts and viruses required by the department.

(b) The department may allow a purveyor to determine the level of inactivation using lower CT values than those specified in (a) of this subsection, provided the purveyor demonstrates to the department's satisfaction that the required levels of inactivation of *Giardia lamblia* cysts and viruses can be achieved.

(4) Determining compliance with the required level of inactivation.

(a) A purveyor shall be considered in compliance with the inactivation requirement when a total inactivation ratio equal to or greater than 1.0 is achieved.

(b) Failure to provide the required level of inactivation on more than one day in any calendar month shall be considered a treatment technique violation.

(5) Residual disinfectant concentration entering the distribution system.

(a) The purveyor shall ensure that all water entering the distribution system contains a residual disinfectant concentration, measured as free or combined chlorine, of at least 0.2 mg/L at all times the system serves water to the public; and

(b) Failure to provide a 0.2 mg/L residual at entry to distribution for more than four hours on any day shall be considered a treatment technique violation.

(6) Residual disinfectant concentration within the distribution system.

(a) The purveyor shall ensure that the residual disinfectant concentration in the distribution system, measured as total chlorine, free chlorine, combined chlorine, or chlorine dioxide, is detectable in at least ninety-five percent of the samples taken each calendar month.

(b) Water in the distribution system with an HPC less than or equal to 500 organisms/ml is considered to have a detectable residual disinfectant concentration.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-662, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-662, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-662, filed 3/25/93, effective 4/25/93.]

WAC 246-290-664 Monitoring for filtered systems.

(1) Source coliform monitoring.

(a) The purveyor shall ensure that source water samples of each surface or GWI source are:

(i) Collected before the first point of disinfectant application and before coagulant chemical addition; and

(ii) Analyzed for fecal coliform density in accordance with methods acceptable to the department.

(b) At a minimum, the purveyor shall ensure source samples are collected for fecal coliform analysis at a frequency equal to ten percent of the number of routine coliform samples collected within the distribution system each month under WAC 246-290-300, or once per calendar month, whichever is greater up to a maximum of one sample per day.

(2) Source turbidity monitoring.

(a) The purveyor using conventional, direct, or in-line filtration shall measure source turbidity at least once per day on a representative sample collected before disinfection and coagulant addition.

(b) Grab sampling or continuous turbidity monitoring and recording may be used to meet the requirement specified in (a) of this subsection.

(c) Purveyors using continuous turbidity monitoring shall record continuous turbidity measurements at equal intervals, at least every four hours, in accordance with a department-approved sampling schedule.

(3) Filtered water turbidity monitoring.

(a) The purveyor shall:

(i) Continuously monitor turbidity on representative samples from each individual filter unit and of the system's combined filter effluent, prior to clearwell storage;

(ii) Record continuous turbidity measurements at equal intervals, at least every four hours, in accordance with a department-approved sampling schedule; and

(iii) Conduct monitoring in accordance with the analytical techniques under WAC 246-290-638.

(b) Purveyors using slow sand filtration or an alternate filtration technology may reduce filtered water turbidity monitoring to one grab sample per day with departmental approval. Reduced turbidity monitoring shall be allowed only where the purveyor demonstrates to the department's satis-

faction that a reduction in monitoring will not endanger the health of consumers served by the water system.

(4) Monitoring the level of inactivation and removal.

(a) Each day the system is in operation, the purveyor shall determine the total level of inactivation and removal of *Giardia lamblia* cysts and viruses achieved.

(b) The purveyor shall determine the total level of inactivation and removal based on:

(i) *Giardia lamblia* cyst and virus removal credit granted by the department for filtration; and

(ii) Level of inactivation of *Giardia lamblia* cysts and viruses achieved through disinfection.

(c) At least once per day, purveyors shall monitor the following to determine the level of inactivation achieved through disinfection:

(i) Temperature of the disinfected water at each residual disinfectant concentration sampling point used for CT calculations; and

(ii) If using chlorine, pH of the disinfected water at each chlorine residual disinfectant concentration sampling point used for CT calculations.

(d) Each day during peak hourly flow (based on historical information), the purveyor shall:

(i) Determine disinfectant contact time, T, to the point at which C is measured; and

(ii) Measure the residual disinfectant concentration, C, of the water at the point for which T is calculated. The C measurement point shall be located before or at the first consumer.

(e) The department may reduce CT monitoring requirements for purveyors that demonstrate to the department's satisfaction that the required levels of inactivation are consistently exceeded. Reduced CT monitoring shall only be allowed where the purveyor demonstrates to the department's satisfaction that a reduction in monitoring will not endanger the health of consumers.

(5) Monitoring the residual disinfectant concentration entering the distribution system.

(a) Systems serving more than thirty-three hundred people per month.

(i) The purveyor shall continuously monitor and record the residual disinfectant concentration of water entering the distribution system and report the lowest value each day.

(ii) If the continuous monitoring equipment fails, the purveyor shall measure the residual disinfectant concentration on grab samples collected at least every four hours at the entry to the distribution system while the equipment is being repaired or replaced. The purveyor shall have continuous monitoring equipment back on-line within five working days following failure.

(b) Systems serving thirty-three hundred or less people per month.

(i) The purveyor shall collect grab samples or use continuous monitoring and recording to measure the residual disinfectant concentration entering the distribution system.

(ii) Purveyors of **community** systems choosing to take grab samples shall collect:

(A) Samples at the following minimum frequencies:

Population Served	Number/day
25 - 500	1
501 - 1,000	2
1,001 - 2,500	3
2,501 - 3,300	4

(B) At least one of the grab samples at peak hourly flow; and

(C) The remaining samples evenly spaced over the time the system is disinfecting water that will be delivered to the public.

(iii) Purveyors of **noncommunity** systems choosing to take grab samples shall collect samples for disinfectant residual concentration entering the distribution system as directed by the department.

(iv) When grab samples are collected and the residual disinfectant concentration at the entry to distribution falls below 0.2 mg/L, purveyors shall collect a grab sample every four hours until the residual disinfectant concentration is 0.2 mg/L or more.

(6) Monitoring residual disinfectant concentrations within the distribution system.

(a) The purveyor shall measure the residual disinfectant concentration at representative points within the distribution system on a daily basis or as otherwise approved by the department.

(b) At a minimum, the purveyor shall measure the residual disinfectant concentration within the distribution system at the same time and location that a routine or repeat coliform sample is collected in accordance with WAC 246-290-300(3) or 246-290-320(2).

(c) The purveyor may measure HPC within the distribution system in lieu of measuring the residual disinfectant concentration in accordance with this subsection.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-664, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-664, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-664, filed 3/25/93, effective 4/25/93.]

WAC 246-290-666 Reporting for filtered systems. (1)

The purveyor shall notify the department, as soon as possible, but no later than the end of the next business day, when:

(a) A waterborne disease outbreak potentially attributable to the water system occurs;

(b) The turbidity of the combined filter effluent exceeds 5.0 NTU at any time;

(c) The residual disinfection concentration falls below 0.2 mg/L at the entry point to the distribution system. The purveyor shall also report whether the residual was restored to 0.2 mg/L or more within four hours; or

(d) An event occurs that may affect the ability of the water treatment facility to produce drinking water that complies with this chapter including, but not limited to:

(i) Spills of hazardous materials in the watershed; and

(ii) Treatment process failures.

(2) The purveyor shall report results of monitoring conducted in accordance with WAC 246-290-664 to the department. Monthly report forms shall be submitted within ten days after the end of each month the system served water to the public.

(3) The purveyor shall report, at a minimum, all the information requested by the department using a department-approved form or format including:

- (a) Water treatment facility operations information;
 - (b) Turbidity monitoring results. Continuous measurements shall be reported at equal intervals, at least every four hours, in accordance with a department-approved schedule;
 - (c) Disinfection monitoring information including:
 - (i) Level of inactivation achieved;
 - (ii) Residual disinfectant concentrations entering the distribution system; and
 - (iii) Residual disinfectant concentrations within the distribution system.
 - (d) Total level of removal and inactivation; and
 - (e) A summary of water quality complaints received from consumers served by the water system.
- (4) A person certified under chapter 246-292 WAC shall complete and sign the monthly report forms required in this section.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-666, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-666, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-666, filed 3/25/93, effective 4/25/93.]

WAC 246-290-668 Watershed control. (1) The purveyor shall, to the extent possible, exercise surveillance over conditions and activities in the watershed affecting source water quality. The purveyor shall develop and implement a department-approved watershed control program.

(2) The purveyor shall ensure that an evaluation of the watershed is completed at least every six years. Watershed evaluations shall be performed such that results of the survey are included in the purveyor's water system plan in accordance with WAC 246-290-100 or small water system management program in accordance with WAC 246-290-105, whichever is applicable.

(3) A professional engineer registered in the state of Washington shall direct the conduct of the watershed evaluation and develop a watershed evaluation report.

(4) The purveyor shall submit the report to the department within sixty days of completion of the watershed evaluation.

(5) The report shall describe the watershed, characterize the watershed hydrology, and discuss the purveyor's watershed control program. The report shall also describe:

- (a) Conditions/activities in the watershed that are adversely affecting source water quality;
- (b) Changes in the watershed that could adversely affect source water quality that have occurred since the last watershed evaluation;
- (c) The monitoring program the purveyor uses to assess the adequacy of watershed protection including an evaluation of sampling results; and
- (d) Recommendations for improved watershed control.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-668, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-668, filed 3/25/93, effective 4/25/93.]

[Title 246 WAC—p. 600]

Subpart C - Requirements for Systems Installing Filtration Facilities

WAC 246-290-670 Compliance requirements for existing unfiltered systems installing filtration. (1) The purveyor of an existing unfiltered system shall:

- (a) Install filtration within eighteen months after department notification; and
- (b) Be subject to the interim compliance requirements as determined by the department and in conformance with 40 CFR 141.13 and WAC 246-290-632.

(2) The purveyor under an enforcement action or compliance agreement that is dated prior to the effective date of Part 6 of chapter 246-290 WAC, shall adhere to the compliance schedule for installation of filtration established in the departmental order or bilateral compliance agreement in lieu of the dates specified in subsection (1) of this section.

(3) The purveyor required to install filtration shall submit an action plan and schedule to the department for review and approval. The plan shall:

- (a) Be submitted within ninety days of departmental notification; and
- (b) Document the purveyor's plan and implementation schedule to comply with one of the following:

(i) Subparts A and B of Part 6 of chapter 246-290 WAC, if continuing to use the surface or GWI source as a permanent source and installing filtration;

(ii) Subparts A and D of Part 6 of chapter 246-290 WAC, if abandoning the surface or GWI source and purchasing completely treated water from a department-approved public water system using surface or GWI water; or

(iii) All other applicable sections of this chapter, if abandoning the surface or GWI source and developing an alternate department-approved ground water source.

(4) Between written departmental notification of the filtration requirement and installation of filtration, the purveyor shall meet:

- (a) The interim disinfection requirements under WAC 246-290-672 or as otherwise directed by the department;
- (b) The interim monitoring and reporting requirements under WAC 246-290-674; and
- (c) All other applicable requirements of this chapter.

(5) The purveyor installing filtration shall ensure that when completed, the final treatment processes, consisting of filtration and disinfection, will comply with the requirements under WAC 246-290-660 and 246-290-662, respectively.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-670, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-670, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-670, filed 3/25/93, effective 4/25/93.]

WAC 246-290-672 Interim treatment requirements.

(1) Purveyors of existing unfiltered systems installing filtration shall provide interim disinfection treatment to:

- (a) Ensure compliance with the monthly coliform MCL under WAC 246-290-310;
- (b) Achieve inactivation levels of *Giardia lamblia* cysts on a daily basis each month the system serves water to the public as directed by the department; and

(2003 Ed.)

(c) Maintain a detectable residual disinfectant concentration in the distribution system, measured as total chlorine, free chlorine, or combined chlorine in 95 percent or more of the samples taken each calendar month. Water in the distribution system with an HPC level less than or equal to 500 organisms/ml is considered to have a detectable residual disinfectant concentration.

(2) Failure to provide the required level of inactivation in subsection (1)(b) of this section on more than one day in any calendar month shall be considered a treatment technique violation.

(3) The department may require the purveyor to provide higher levels of treatment than specified in subsection (1)(b) of this section when necessary to protect the health of consumers served by the public water system.

(4) Interim treatment requirements shall be met in accordance with a schedule acceptable to the department.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-672, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-672, filed 3/25/93, effective 4/25/93.]

WAC 246-290-674 Interim monitoring and reporting. (1) Monitoring. Unless directed otherwise by the department, the purveyor of an existing unfiltered system installing filtration shall:

(a) Conduct interim monitoring in accordance with 40 CFR 141.22;

(b) Measure the residual disinfectant concentration within the distribution system at the same time and location that a routine or repeat sample is collected in accordance with WAC 246-290-300(3) or 246-290-320(2); and

(c) Measure residual disinfection concentrations at entry to the distribution system on a daily basis, or as directed by the department.

(2) Reporting.

(a) The purveyor installing filtration shall report to the department as soon as possible, but no later than the end of the next business day, when:

(i) A waterborne disease outbreak potentially attributable to the water system occurs;

(ii) The turbidity of water delivered to the public exceeds 5.0 NTU; or

(iii) The interim disinfection requirements under WAC 246-290-672 are not met.

(b) The purveyor shall report results of monitoring to the department. Monthly report forms shall be submitted within ten days after the end of each month the system served water to the public.

(c) The purveyor shall report, at a minimum, all the information requested by the department using a department-approved form or format including:

(i) Water quality information, including results of monitoring in accordance with WAC 246-290-300 and 246-290-320;

(ii) Disinfection monitoring information;

(iii) A summary of water quality complaints received from consumers served by the system.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-674, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-674, filed 3/25/93, effective 4/25/93.]

(2003 Ed.)

WAC 246-290-676 Filtration technology and design criteria. (1) General.

(a) The purveyor proposing to construct new water treatment facilities or to make additions to existing water treatment facilities for surface and GWI sources shall ensure that the facilities comply with the treatment, design, and reliability requirements of Part 6 of chapter 246-290 WAC.

(b) The purveyor shall submit an engineering report to the department describing how the treatment facilities will be designed to comply with the requirements specified in Subparts A, B, and C of Part 6 of chapter 246-290 WAC.

(2) Filtration technology.

(a) The purveyor shall select a filtration technology acceptable to the department using criteria such as those outlined in department guidance on surface water treatment. The following filtration technologies are considered acceptable:

(i) Conventional;

(ii) Direct;

(iii) Diatomaceous earth; and

(iv) Slow sand.

(b) In addition to the technologies specified in subsection (1) of this section, alternate filtration technologies may be acceptable, if the purveyor demonstrates to the department's satisfaction all of the following:

(i) Through acceptable third party testing, that system components do not leach or otherwise add substances to the finished water that would violate drinking water standards, or otherwise pose a threat to public health;

(ii) The technology's effectiveness in achieving at least 99 percent (2 log) removal of *Giardia lamblia* cysts or cyst surrogate particles. The purveyor shall further demonstrate the technology's removal capability through research conducted:

(A) By a party acceptable to the department; and

(B) In accordance with protocol and standards acceptable to the department.

(iii) Through on-site pilot plant studies or other means, that the filtration technology:

(A) In combination with disinfection treatment consistently achieves 99.9 percent (3 log) removal and inactivation of *Giardia lamblia* cysts and 99.99 percent (4 log) removal and inactivation of viruses; and

(B) Meets the applicable turbidity performance requirements as determined by the department for the specific treatment process being considered, but in no case to exceed 1.0 NTU for the finished water.

(3) Pilot studies.

(a) The purveyor shall ensure pilot studies are conducted for all proposed filtration facilities, except where waived based on engineering justification acceptable to the department.

(b) The purveyor shall obtain department approval for the pilot study plan before the pilot filter is constructed and before the pilot study is undertaken.

(c) The pilot study plan shall identify at a minimum:

(i) Pilot filter design;

(ii) Water quality and operational parameters to be monitored;

(iii) Type of data to be collected, frequency of data collection, and length of pilot study; and

(iv) Pilot plant operator qualifications.

(d) The purveyor shall ensure that the pilot study is:

(i) Conducted to simulate proposed full-scale design conditions;

(ii) Conducted over a time period that will demonstrate the effectiveness and reliability of the proposed treatment system during changes in seasonal and climatic conditions; and

(iii) Designed and operated in accordance with good engineering practices and that ANSI/NSF standards 60 and 61 are considered.

(e) When the pilot study is complete, the purveyor shall submit a project report to the department for approval in accordance with WAC 246-290-110.

(4) Design criteria.

(a) The purveyor shall ensure that water treatment facilities for surface and GWI sources are designed and constructed in accordance with good engineering practices documented in references such as those identified in WAC 246-290-200.

(b) Filtration facilities.

(i) The purveyor shall ensure that all new filtration facilities and improvements to any existing filtration facilities (excluding disinfection) are designed to achieve at least:

(A) 99 percent (2 log) removal of *Giardia lamblia* cysts; and

(B) 90 percent (1 log) removal of viruses.

(ii) The purveyor proposing to use an alternate filtration technology that does not meet the requirements of (b)(i)(B) of this subsection shall demonstrate to the department's satisfaction that the potential for viral contamination of the source is low. The purveyor shall base the demonstration on results of a watershed evaluation acceptable to the department.

(iii) The purveyor shall ensure that all new filtration facilities contain provisions for filtering to waste with appropriate measures for backflow prevention.

(c) The purveyor shall ensure that disinfection systems for new filtration facilities or improvements to existing disinfection facilities are designed to meet the requirements of WAC 246-290-662.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-676, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-676, filed 3/25/93, effective 4/25/93.]

WAC 246-290-678 Reliability for filtered systems. (1)

The purveyor shall ensure that reliability features are included in all water treatment facilities used to treat surface or GWI sources.

(2) Reliability features shall include but not be limited to:

(a) Alarm devices to provide warning of treatment process failures including coagulation, filtration, and disinfection. Alarm devices shall warn individuals responsible for taking corrective action and/or provide for automatic plant shutdown until corrective action can be taken;

(b) Standby replacement equipment available to assure continuous operation and control of coagulation, clarification, filtration and disinfection processes;

(c) Multiple filter units that provide redundant capacity when filters are out of service for backwash or maintenance,

except where waived based on engineering justification acceptable to the department.

(3) The department may accept alternatives to the requirements specified in subsection (2) of this section, if the purveyor demonstrates to the department's satisfaction that the proposed alternative will assure an equal degree of reliability.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-678, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 93-08-011 (Order 352B), § 246-290-678, filed 3/25/93, effective 4/25/93.]

Subpart D - Requirements for Other Unfiltered Systems

WAC 246-290-686 Compliance requirements for unfiltered systems. (1) The purveyor using an unfiltered surface or GWI source shall comply with:

(a) Subparts A and D of Part 6 of chapter 246-290 WAC; and

(b) All other applicable sections of this chapter.

(2) The purveyor purchasing water from a system using a surface or GWI source shall comply with:

(a) The applicable requirements of Subpart A of Part 6 of chapter 246-290 WAC;

(b) The disinfection, monitoring and reporting requirements under WAC 246-290-692 (5)(b), 246-290-694 (8)(b) and 246-290-696(4) respectively when purchasing completely treated surface or GWI water; or

(c) The treatment technique, monitoring and reporting requirements as directed by the department when the purveyor is purchasing incompletely treated surface or GWI water.

(3) The purveyor using an unfiltered GWI source shall be subject to the effective dates, compliance requirements, and violations specified in Table 12.

**Table 12
COMPLIANCE REQUIREMENTS FOR
SYSTEMS USING UNFILTERED GWI SOURCES**

REQUIREMENTS BECOME EFFECTIVE	APPLICABLE PART 6 REQUIREMENTS	VIOLATION TYPE	
		Turbidity MCL	Treatment Technique
Six months after GWI determination	Only Analytical, Monitoring and Reporting Requirements (WAC 246-290-638, 246-290-694 and 246-290-696 respectively)	Refer to 40 CFR 141.13 and 141.22	Not in effect yet
Eighteen months after GWI determination	Subparts A and D	No longer in effect	In effect as defined in WAC 246-290-632

(4) Purveyors of **community** systems using surface water sources had the option to remain unfiltered if they demonstrated compliance with the department's criteria to remain unfiltered by December 30, 1991.

(5) A purveyor that served water to the public before January 1, 1991, using a GWI source may have that source remain unfiltered, if, within eighteen months of GWI determination, the purveyor complies with Part 6 of this chapter and, the source water quality and site-specific conditions under WAC 246-290-690 or 246-290-691 as demonstrated

through monitoring conducted in accordance with WAC 246-290-694.

(6) The purveyor with sources that are approved to remain unfiltered shall comply with the source water quality and site-specific conditions under WAC 246-290-690 or 246-290-691 as demonstrated through monitoring conducted in accordance with WAC 246-290-694.

(7) The purveyor shall install filtration when the system fails to meet one or more of the source water quality and site-specific conditions under WAC 246-290-690 and 246-290-691, or the department determines that installation of filtration is necessary to protect the health of consumers served by the water system.

(8) The purveyor, in response to a written notification by the department, shall install filtration within eighteen months.

(9) The purveyor may comply with the requirements to install filtration by:

(a) Constructing a water treatment facility that is designed, operated, and maintained in accordance with Subparts A, B, and C of Part 6 of this chapter;

(b) Satisfying the source water quality and site-specific criteria specified in WAC 246-290-691 and constructing treatment facilities that are designed, operated, and maintained to provide a limited alternative to filtration in accordance with WAC 246-290-692; or

(c) Abandoning the surface water or GWI source, and:

(i) Developing an alternate, department-approved ground water source; or

(ii) Purchasing completely treated water from a department-approved public water system.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-686, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-686, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-686, filed 3/25/93, effective 4/25/93.]

WAC 246-290-690 Criteria to remain unfiltered. (1)

For a system not using the "limited alternative to filtration" option to remain unfiltered, the purveyor using a surface water or GWI source shall meet the source water quality and site-specific conditions under this section, as demonstrated through monitoring conducted in accordance with WAC 246-290-694.

(2) Source water quality conditions necessary to remain unfiltered.

(a) Coliform limits.

(i) The purveyor shall ensure that representative source water samples taken before the first point of disinfection have a fecal coliform density less than or equal to 20/100 ml in ninety percent or more of all samples taken during the six previous calendar months the system served water to the public. Samples collected on days when source water turbidity exceeds 1.0 NTU shall be included when determining compliance with this requirement.

(ii) The purveyor shall submit a written report to the department if no source fecal coliform data has been submitted for days when source turbidity exceeded 1.0 NTU. The report shall document why sample results are not available and shall be submitted with the routine monitoring reports for the month in which the sample results are not available.

(b) Turbidity limits.

(i) The purveyor shall ensure that the turbidity level in representative source water samples taken before primary disinfection does not exceed 5.0 NTU.

(ii) A system failing to meet the turbidity requirements in (b)(i) of this subsection may remain unfiltered, if:

(A) The purveyor demonstrates to the department's satisfaction that the most recent turbidity event was caused by unusual and unpredictable circumstances; and

(B) Including the most recent turbidity event, there have not been more than:

(I) Two turbidity events in the twelve previous calendar months the system served water to the public; or

(II) Five turbidity events in the one-hundred-twenty previous calendar months the system served water to the public.

(iii) The purveyor of a system experiencing a turbidity event shall submit a written report to the department documenting why the turbidity event(s) occurred. The purveyor shall submit the report with the routine monitoring reports for the month in which the turbidity event(s) occurred.

(iv) The purveyor of a system with alternate, department-approved sources or sufficient treated water storage may avoid a turbidity event by implementing operational adjustments to prevent water with a turbidity exceeding 5.0 NTU from being delivered to consumers.

(v) When an alternate source or treated water storage is used during periods when the turbidity of the surface or GWI source exceeds 5.0 NTU, the purveyor shall not put the surface or GWI source back on-line, until the source water turbidity is 5.0 NTU or less.

(3) Site-specific conditions to remain unfiltered.

(a) Level of inactivation.

(i) The purveyor shall ensure that the *Giardia lamblia* cyst and virus inactivation levels required under WAC 246-290-692(1) are met in at least eleven of the twelve previous calendar months that the system served water to the public.

(ii) A system failing to meet the inactivation requirements during two of the twelve previous calendar months that the system served water to the public may remain unfiltered, if the purveyor demonstrates to the department's satisfaction that at least one of the failures was caused by unusual and unpredictable circumstances.

(iii) To make such a demonstration, the purveyor shall submit to the department a written report documenting the reasons for the failure. The purveyor shall submit the report with the routine monitoring reports for the month in which the failure occurred.

(b) Redundant disinfection components or automatic shut-off.

The purveyor shall ensure that the requirement for redundant disinfection system components or automatic shut-off of water to the distribution system under WAC 246-290-692(3) is met at all times the system serves water to the public.

(c) Disinfectant residual entering the distribution system.

(i) The purveyor shall ensure that the requirement for having a residual entering the distribution system under WAC 246-290-692(4) is met at all times the system serves water to the public.

(ii) A system failing to meet the disinfection requirement under (c)(i) of this subsection may remain unfiltered, if the

purveyor demonstrates to the department's satisfaction that the failure was caused by unusual and unpredictable circumstances.

(iii) To make such a demonstration, the purveyor shall submit to the department a written report documenting the reasons for the failure. The purveyor shall submit the report with the routine monitoring reports for the month in which the failure occurred.

(d) Disinfectant residuals within the distribution system.

(i) The purveyor shall ensure that the requirement for maintaining a residual within the distribution system under WAC 246-290-692(5) is met on an ongoing basis.

(ii) A system failing to meet the disinfection requirements under (d)(i) of this subsection may remain unfiltered, if the purveyor demonstrates to the department's satisfaction that the failure was caused by something other than a deficiency in source water treatment.

(iii) To make such a demonstration, the purveyor shall submit to the department a written report documenting the reasons for the failure. The purveyor shall submit the report with the routine monitoring reports for the month in which the failure occurred.

(e) Watershed control.

(i) The purveyor shall develop and implement a department-approved watershed control program.

(ii) The purveyor shall monitor, limit, and control all facilities and activities in the watershed affecting source quality to preclude degradation of the physical, chemical, microbiological (including viral), and radiological quality of the source. The purveyor shall demonstrate, through ownership and/or written agreements acceptable to the department, control of all human activities that may adversely impact source quality.

(iii) At a minimum, the purveyor's watershed control program shall:

(A) Characterize the watershed hydrology and land ownership;

(B) Identify watershed characteristics and activities that may adversely affect source water quality; and

(C) Monitor the occurrence of activities that may adversely affect source water quality.

(iv) If the department determines significant changes have occurred in the watershed, the purveyor shall submit, within ninety days of notification, an updated watershed control program to the department for review and approval.

(v) The department may require an unfiltered system to conduct additional monitoring to demonstrate the adequacy of the watershed control program.

(vi) A purveyor shall be considered out of compliance when failing to:

(A) Have a department-approved watershed control program;

(B) Implement the watershed control program to the satisfaction of the department; or

(C) Conduct additional monitoring as directed by the department.

(f) On-site inspections.

(i) The department shall conduct on-site inspections to assess watershed control and disinfection treatment.

(ii) The department shall conduct annual inspections unless more frequent inspections are deemed necessary to protect the health of consumers served by the system.

(iii) For a system to remain unfiltered, the on-site inspection shall indicate to the department's satisfaction that the watershed control program and disinfection treatment comply with (e) of this subsection and WAC 246-290-692, respectively.

(iv) The purveyor with unsatisfactory on-site inspection results shall take action as directed by the department in accordance with a department-established schedule.

(g) Waterborne disease outbreak.

(i) To remain unfiltered, a system shall not have been identified by the department as the cause of a waterborne disease outbreak attributable to a failure in treatment of the surface or GWI source.

(ii) The purveyor of a system identified by the department as the cause of a waterborne disease outbreak may remain unfiltered, if the purveyor demonstrates to the department's satisfaction that system facilities and/or operations have been sufficiently modified to prevent another waterborne disease outbreak.

(h) Total coliform MCL.

(i) For a system to remain unfiltered, the purveyor shall ensure that the MCL for total coliform under WAC 246-290-310 is met in at least eleven of the twelve previous calendar months the system served water to the public.

(ii) A system failing to meet the criteria in (i) of this subsection, may remain unfiltered, if the purveyor demonstrates to the department's satisfaction that the total coliform MCL violations were not caused by a deficiency in source water treatment.

(iii) The department shall determine the adequacy of source water treatment based on results of total coliform monitoring at the entry to the distribution system in accordance with WAC 246-290-694(3).

(i) THM MCL and monitoring.

For a system to remain unfiltered, the purveyor shall comply with the THM monitoring and MCL requirements under WAC 246-290-300 and 246-290-310, respectively.

(j) Laboratory services.

(i) For a system to remain unfiltered, the purveyor shall retain the services of the public health laboratory or another laboratory certified by the department to analyze samples for total and fecal coliform. Laboratory services shall be available on an as needed basis, seven days a week, including holidays. The purveyor shall identify in the annual comprehensive report required under WAC 246-290-696 the certified laboratory providing these services.

(ii) The department may waive this requirement, if the purveyor demonstrates to the department's satisfaction that an alternate, department-approved source is used when the turbidity of the surface or GWI source exceeds 1.0 NTU.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-690, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050, 93-08-011 (Order 352B), § 246-290-690, filed 3/25/93, effective 4/25/93.]

WAC 246-290-691 Criteria for unfiltered systems with a "limited alternative to filtration" to remain unfiltered. (1) For a system providing a limited alternative to fil-

tration, the purveyor using a surface water or GWI source shall meet the source quality and site-specific conditions under this section.

(2) Source water turbidity requirements.

(a) The purveyor shall ensure that the turbidity level in representative source water samples taken before primary disinfection does not exceed 5.0 NTU.

(b) A system with more than two turbidity events in the twelve previous calendar months the water was served to the public or more than five turbidity events in the one hundred twenty previous calendar months the water was served to the public shall expand the scope of its next annual comprehensive report required under WAC 246-290-696(6) to include:

- (i) A description of the events;
- (ii) A summary of previous turbidity events;
- (iii) A proposed plan of corrective action; and
- (iv) A schedule for implementing the action plan.

(3) Site-specific requirements.

(a) Level of inactivation.

(i) The purveyor shall ensure that the removal and/or inactivation levels required under WAC 246-290-630(11) are met in at least eleven of the twelve previous calendar months that the system served water to the public.

(ii) A system failing to meet the inactivation requirements in (a)(i) of this subsection in two or more months of the previous twelve calendar months the system served water to the public shall expand the scope of its annual comprehensive report required under WAC 246-290-696(6) to include:

- (A) A description of the failure(s);
- (B) A summary of previous inactivation failures;
- (C) A proposed plan of corrective action; and
- (D) A schedule for implementing the action plan.

(b) Watershed control.

(i) The watershed must not be allowed to be inhabited, except for those designated individuals and for those periods of time each year that would be directly associated with the protection of the watershed.

(ii) The purveyor shall develop and implement a department-approved watershed control program.

(iii) The purveyor shall monitor, limit, and control all facilities and activities in the watershed affecting source quality to preclude degradation of the physical, chemical, microbiological (including viral), and radiological quality of the source. The purveyor shall demonstrate, through ownership and/or written agreements acceptable to the department, control of all human activities that may adversely impact source quality.

(iv) At a minimum, the purveyor's watershed control program shall:

- (A) Characterize the watershed hydrology and land ownership;
- (B) Identify watershed characteristics and activities that may adversely affect source water quality; and
- (C) Monitor the occurrence of activities that may adversely affect source water quality.

(v) If the department determines significant changes have occurred in the watershed, the purveyor shall submit, within ninety days of notification, an updated watershed control program to the department for review and approval.

(2003 Ed.)

(vi) The purveyor may be required to conduct additional monitoring to demonstrate the adequacy of the watershed control program.

(vii) A purveyor shall be considered out of compliance when failing to:

(A) Have a department-approved watershed control program;

(B) Implement the watershed control program to the satisfaction of the department;

(C) Conduct additional monitoring as directed by the department; or

(D) Prevent the human inhabitation of the watershed, except during the periods of time when conducting watershed protection activities as provided in (b)(i) of this subsection.

(c) On-site inspections.

(i) The purveyor shall submit to on-site inspections by the department to assess watershed control and disinfection treatment.

(ii) The purveyor shall submit to annual inspections by the department unless more frequent inspections are deemed necessary to protect the health of consumers served by the system.

(iii) The purveyor with unsatisfactory on-site inspection results shall take action as directed by the department in accordance with a department-established schedule.

(d) Waterborne disease outbreak.

(i) The system shall not be identified by the department as the cause of a waterborne disease outbreak attributable to a failure in treatment of the surface or GWI source.

(ii) A system identified by the department as the cause of a waterborne disease in (d)(i) of this subsection shall expand the scope of its annual comprehensive report required under WAC 246-290-696(6) to include:

(A) A description of the outbreak;

(B) A summary of previous waterborne disease outbreaks attributed to the system;

(C) A proposed plan of corrective action; and

(D) A schedule for implementing the action plan.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-691, filed 3/9/99, effective 4/9/99.]

WAC 246-290-692 Disinfection for unfiltered systems. (1) General requirements.

(a) The purveyor without a limited alternative to filtration shall provide continuous disinfection treatment to ensure at least 99.9 percent (3 log) inactivation of *Giardia lamblia* cysts and 99.99 percent (4 log) inactivation of viruses at all times the system serves water to the public.

(b) The purveyor with a limited alternative to filtration shall meet the treatment requirements in WAC 246-290-630(11) at all times the system serves water to the public.

(c) The purveyor may be required to provide greater levels of inactivation of *Giardia lamblia* cysts, other pathogenic microorganisms of public health concern, and viruses to protect the health of consumers.

(d) Failure to meet the inactivation level requirements of WAC 246-290-690 (3)(a) or 246-290-691 (3)(a) shall be considered a violation.

(2) Determining the level of inactivation.

[Title 246 WAC—p. 605]

(a) Each day the system without a limited alternative to filtration serves water to the public, the purveyor, using procedures and CT_{99.9} values specified in 40 CFR 141.74, Vol. 54, No. 124, (published June 29, 1989, and copies of which are available from the department), shall determine:

(i) CT values using the system's treatment parameters and calculate the total inactivation ratio achieved by disinfection; and

(ii) Whether the system's disinfection treatment process is achieving the minimum levels of inactivation of *Giardia lamblia* cysts and viruses required by the department. For purposes of determining compliance with the inactivation requirements specified in subsection (1) of this section, no credit shall be granted for disinfection applied to a source water with a turbidity greater than 5.0 NTU.

(b) Each day the system with a limited alternative to filtration serves water to the public, the purveyor, using appropriate guidance, shall determine:

(i) CT values using the system's treatment parameters and calculate the total inactivation ratio achieved by disinfection; and

(ii) Whether the system's treatment process is achieving the minimum levels of inactivation of *Giardia lamblia* cysts, viruses, or other pathogenic organisms of health concern that would be greater than what would be expected from the combination of filtration plus chlorine disinfection.

(c) The purveyor shall be considered in compliance with the daily inactivation requirement when a total inactivation ratio equal to or greater than 1.0 is achieved.

(d) The purveyor of a system using a disinfectant or combination of disinfectants may use CT values lower than those specified in (a) of this subsection, if the purveyor demonstrates to the department's satisfaction that the required levels of inactivation of *Giardia lamblia* cysts, viruses, and, if providing a limited alternative to filtration, any other pathogenic organisms of public health concern, can be achieved using the lower CT values.

(e) The purveyor of a system using preformed chloramines or adding ammonia to the water before chlorine shall demonstrate to the department's satisfaction that the system achieves at least 99.99 percent (4 log) inactivation of viruses.

(3) The purveyor using either unfiltered or "limited alternative to filtration" treated sources shall ensure that disinfection facilities provide either:

(a) Redundant components, including an auxiliary power supply with automatic start-up and alarm, to ensure continuous disinfection. Redundancy shall ensure that both the minimum inactivation requirements and the requirement for a 0.2 mg/L residual disinfectant concentration at entry to the distribution system are met at all times water is delivered to the distribution system; or

(b) Automatic shut-off of delivery of water to the distribution system when the residual disinfectant concentration in the water is less than 0.2 mg/L. Automatic shut-off shall be allowed only in systems where the purveyor demonstrates to the department's satisfaction that automatic shutoff will not endanger health or interfere with fire protection.

(4) Disinfectant residual entering the distribution system.

(a) The purveyor shall ensure that water entering the distribution system contains a residual disinfectant concentration, measured as free or combined chlorine, of at least 0.2 mg/L at all times the system serves water to the public; and

(b) Failure to provide a 0.2 mg/L residual at entry to distribution for more than four hours on any day shall be considered a treatment technique violation.

(5) Disinfectant residuals within the distribution system.

(a) The purveyor shall ensure that the residual disinfectant concentration in the distribution system, measured as total chlorine, free chlorine, combined chlorine, or chlorine dioxide, is detectable in at least ninety-five percent of the samples taken each calendar month.

(b) The purveyor of a system that purchases completely treated surface or GWI water as determined by the department shall comply with the requirements specified in (a) of this subsection.

(c) Water in the distribution system with an HPC level less than or equal to 500 organisms/ml is considered to have a detectable residual disinfectant concentration.

[Statutory Authority: RCW 43.02.050, 99-07-021, § 246-290-692, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050, 94-14-001, § 246-290-692, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-692, filed 3/25/93, effective 4/25/93.]

WAC 246-290-694 Monitoring for unfiltered systems. (1) Source coliform monitoring for systems without a limited alternative to filtration.

(a) The purveyor shall ensure that source water samples of each surface or GWI source are representative and:

(i) Collected before the first point of disinfectant application; and

(ii) Analyzed for fecal coliform density in accordance with methods acceptable to the department.

(b) The purveyor shall ensure source samples are collected for fecal coliform analysis each week the system serves water to the public based on the following schedule:

Population Served	Minimum Number/week*
25 - 500	1
501 - 3,300	2
3,301 - 10,000	3
10,001 - 25,000	4
>25,000	5

* Must be taken on separate days.

(c) Each day the system serves water to the public and the turbidity of the source water exceeds 1.0 NTU, the purveyor shall ensure one representative source water sample is collected before the first point of disinfectant application and analyzed for fecal coliform density. This sample shall count toward the weekly source coliform sampling requirement.

(d) A purveyor shall not be considered in violation of (c) of this subsection, if the purveyor demonstrates to the department's satisfaction that, for valid logistical reasons outside the purveyor's control, the additional fecal coliform sample could not be analyzed within a time frame acceptable to the department.

(2) Source coliform monitoring for systems with a limited alternative to filtration.

(a) The purveyor shall ensure that source water samples of each surface or GWI source are:

(i) Collected before the first point of primary disinfection; and

(ii) Analyzed for fecal coliform density in accordance with methods acceptable to the department.

(b) At a minimum, the purveyor shall ensure source samples are collected for fecal coliform analysis at a frequency equal to ten percent the number of routine coliform samples collected within the distribution system each month under WAC 246-290-300, or once per calendar month, whichever is greater, up to a maximum of one sample per day.

(3) Coliform monitoring at entry to distribution for systems without a limited alternative to filtration.

(a) The purveyor shall collect and have analyzed one coliform sample at the entry point to the distribution system each day that a routine or repeat coliform sample is collected within the distribution system under WAC 246-290-300(3) or 246-290-320(2), respectively.

(b) The purveyor shall use the results of the coliform monitoring at entry to distribution along with inactivation ratio monitoring results to demonstrate the adequacy of source treatment.

(4) Source turbidity monitoring for systems without a limited alternative to filtration.

(a) The purveyor shall continuously monitor and record turbidity:

(i) On representative source water samples before the first point of primary disinfectant application; and

(ii) In accordance with the analytical techniques under WAC 246-290-638.

(b) If source water turbidity is not the same as the turbidity of water delivered to consumers, the purveyor shall continuously monitor and record turbidity of water delivered.

(5) Source turbidity monitoring for systems with a limited alternative to filtration. The purveyor shall:

(a) Continuously monitor turbidity on representative source samples before the first point of primary disinfection application;

(b) Record continuous turbidity measurements at equal intervals, of at least four hours, in accordance with a department-approved sampling schedule; and

(c) Conduct monitoring in accordance with the analytical techniques under WAC 246-290-638.

(6) Monitoring the level of inactivation.

(a) Each day the system is in operation, the purveyor shall determine the total level of inactivation of *Giardia lamblia* cysts, viruses, and, if providing a limited alternative to filtration, any other pathogenic organisms of health concern, achieved through disinfection.

(b) At least once per day, the purveyor shall monitor the following parameters to determine the total inactivation ratio achieved through disinfection:

(i) Temperature of the disinfected water at each residual disinfectant concentration sampling point used for CT calculations; and

(ii) If using chlorine, pH of the disinfected water at each chlorine residual disinfectant concentration sampling point used for CT calculations.

(c) Each day during peak hourly flow, the purveyor shall:

(i) Determine disinfectant contact time, T, to the point at which C is measured; and

(ii) Measure the residual disinfectant concentration, C, of the water at the point for which T is calculated. The C measurement point must be before or at the first consumer.

(7) Monitoring the residual disinfectant concentration entering the distribution system for either unfiltered systems, or systems using a limited alternative to filtration.

(a) Systems serving more than thirty-three hundred people.

(i) The purveyor shall continuously monitor and record the residual disinfectant concentration of water entering the distribution system and report the lowest value each day.

(ii) If the continuous monitoring equipment fails, the purveyor shall measure the residual disinfectant concentration on grab samples collected at least every four hours at the entry to the distribution system while the equipment is being repaired or replaced. The purveyor shall have continuous monitoring equipment back on-line within five working days following failure.

(b) Systems serving thirty-three hundred or less people.

(i) The purveyor shall collect grab samples or use continuous monitoring and recording to measure the residual disinfectant concentration entering the distribution system.

(ii) A purveyor choosing to take grab samples shall collect:

(A) Samples at the following minimum frequencies:

Population Served	Number/day
25 - 500	1
501 - 1,000	2
1,001 - 2,500	3
2,501 - 3,300	4

(B) At least one of the grab samples at peak hourly flow based on historical flows for the system; and

(C) The remaining sample or samples at intervals evenly spaced over the time the system is disinfecting water that will be delivered to the public.

(iii) When grab samples are collected and the residual disinfectant concentration at the entry to distribution falls below 0.2 mg/L, the purveyor shall collect a grab sample every four hours until the residual disinfectant concentration is 0.2 mg/L or more.

(8) Monitoring residual disinfectant concentration within the distribution system for either unfiltration systems, or systems using a limited alternative to filtration.

(a) The purveyor shall measure the residual disinfectant concentration within the distribution system at the same time and location that a routine or repeat coliform sample is collected in accordance with WAC 246-290-300(3) or 246-290-320(2) or once per day, whichever is greater.

(b) The purveyor of a system that purchases completely treated surface or GWI water as determined by the department shall comply with the requirements of (a) of this subsection or as otherwise directed by the department under WAC 246-290-300 (2)(c). At a minimum, the purveyor shall measure the residual disinfectant concentration within the distribution system at the same time and location that a routine or

repeat coliform sample is collected in accordance with WAC 246-290-300(3) or 246-290-320(2).

(c) The purveyor may measure HPC within the distribution system in lieu of measuring the residual disinfectant concentration in accordance with this subsection.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-694, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-694, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-694, filed 3/25/93, effective 4/25/93.]

WAC 246-290-696 Reporting for unfiltered systems.

(1) The purveyor shall report to the department as soon as possible, but no later than the end of the next business day, when:

(a) A waterborne disease outbreak potentially attributable to the water system occurs;

(b) The turbidity of water delivered to the public exceeds 5.0 NTU;

(c) The minimum level of inactivation required by the department is not met;

(d) The residual disinfectant concentration falls below 0.2 mg/L at the entry point to the distribution system. The purveyor shall also report whether the residual was restored to 0.2 mg/L or more within four hours; or

(e) The surface or GWI source is taken off-line due to an emergency.

(2) The purveyor shall report results of monitoring conducted in accordance with WAC 246-290-694 to the department. Monthly report forms shall be submitted within ten days after the end of each month the system served water to the public.

(3) The purveyor shall report, at a minimum, all the information requested by the department using a department-approved form or format including:

(a) Water quality information, including the results of both:

(i) Source coliform monitoring; and

(ii) Source turbidity monitoring.

(b) Disinfection monitoring information, including:

(i) Level of inactivation achieved;

(ii) Residual disinfectant concentrations entering the distribution system; and

(iii) Residual disinfectant concentrations within the distribution system.

(c) A summary of water quality complaints received from consumers served by the water system.

(4) The purveyor of a system that purchases completely treated water shall:

(a) Report results of distribution system residual disinfectant concentration monitoring to the department using department-approved forms or format; and

(b) Submit forms to the department in accordance with subsection (2) of this section or as otherwise directed by the department.

(5) A person certified under chapter 246-292 WAC shall complete and sign the monthly report forms required in this section.

(6) Beginning in 1992, by October 10th of each year, the purveyor shall submit to the department an annual comprehensive report that summarizes the:

(a) Effectiveness of the watershed control program and identifies, at a minimum, the following:

(i) Activities in the watershed that are adversely affecting source water quality;

(ii) Changes in the watershed that have occurred within the previous year that could adversely affect source water quality;

(iii) Activities expected to occur in the watershed in the future and how the activities will be monitored and controlled;

(iv) The monitoring program the purveyor uses to assess the adequacy of watershed protection including an evaluation of sampling results; and

(v) Special concerns about the watershed and how the concerns are being addressed;

(b) System's compliance with the criteria to remain unfiltered under WAC 246-290-690, or, when applicable, the criteria required if the system provides a limited alternative to filtration under WAC 246-290-691; and

(c) Significant changes in system design and/or operation that have occurred within the previous year that impact the ability of the system to comply with the criteria to remain unfiltered, or, if applicable, the ability of the system to provide a limited alternative to filtration in accordance with WAC 246-290-692.

(7) The purveyor of a system attempting to remain unfiltered or to remain with a limited alternative to filtration shall submit a *Filtration Decision Report* at the request of the department. The report shall:

(a) Provide the information by which the department may determine whether a system continues to meet the criteria to remain unfiltered or, if applicable, the criteria allowing the provision of a limited alternative to filtration; and

(b) Be submitted on a schedule as specified by the department.

[Statutory Authority: RCW 43.02.050. 99-07-021, § 246-290-696, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. 94-14-001, § 246-290-696, filed 6/22/94, effective 7/23/94; 93-08-011 (Order 352B), § 246-290-696, filed 3/25/93, effective 4/25/93.]

PART 7. REPORTING

Subpart B - Consumer Confidence Reports

WAC 246-290-72001 Purpose and applicability of the consumer confidence report requirements. WAC 246-290-72001 through 246-290-72012 establishes minimum requirements for the content of annual reports that community water systems must deliver to their customers. These reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner.

(1) Notwithstanding the provisions of WAC 246-290-020, this section applies only to community water systems.

(2) For the purpose of WAC 246-290-72001 through 246-290-72012:

(a) "Customers" means billing units or service connections to which water is delivered by a community water system.

(b) "Detected" means at or above the levels prescribed by WAC 246-290-300(4) for inorganic contaminants, at or above the levels prescribed by WAC 246-290-300(7) for organic contaminants, and at or above the levels prescribed by 40 CFR 141.25(c) for radioactive contaminants.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72001, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72002 Reporting dates. (1) Each existing community water system must deliver its report by July 1 annually. Each annual report must contain data collected during, or prior to, the previous calendar year as required by WAC 246-290-72005(3).

(2) A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation and annually thereafter.

(3) A community water system that sells water to another community water system must deliver the applicable information required in WAC 246-290-72003 through 246-290-72009 to the buyer system:

(a) No later than April 1 annually; or

(b) On a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72002, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72003 Report contents—Source water. Information on the source of the water delivered:

(1) Each report must identify the source(s) of the water delivered by the community water system by providing information on:

(a) The type of the water, for example, surface water, ground water, spring water, or purchased water; and

(b) The commonly used name (if any) and location of the body (or bodies) of water.

(2) If a source water assessment has been completed, the report must notify consumers of the availability of this information and the means to obtain it. In addition, systems are encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information.

(3) Where a system has received a source water assessment from the department, the report must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the department or written by the purveyor.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72003, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72004 Report contents—Definitions.

(1) Each report must include the following definitions:

(a) Maximum contaminant level goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

(2003 Ed.)

(b) Maximum contaminant level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(2) A report for a community water system operating under a variance or an exemption issued under WAC 246-290-060 must include the following definition: Variances and exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

(3) A report that contains data on contaminants that the Environmental Protection Agency regulates using any of the following terms must include the applicable definitions:

(a) Treatment technique: A required process intended to reduce the level of a contaminant in drinking water.

(b) Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

(c) Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

(d) Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72004, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72005 Report contents—Information on detected contaminants. (1) This section specifies the requirements for information to be included in each report for contaminants subject to mandatory monitoring. It applies to:

(a) Contaminants subject to an MCL, action level, maximum residual disinfectant level or treatment technique (regulated contaminants);

(b) Contaminants for which monitoring is required by WAC 246-290-300(8); and

(c) Disinfection by-products for which monitoring is required by WAC 246-290-300(6) and 40 CFR 141.142 or microbial contaminants for which monitoring is required by WAC 246-290-300(3) and 40 CFR 141.143, except as provided under WAC 246-290-72006(1), and which are detected in the finished water.

(2) The data relating to these contaminants must be displayed in one table or in several adjacent tables. Any additional monitoring results which a community water system chooses to include in its report must be displayed separately.

(3) The data must be derived from data collected to comply with the Environmental Protection Agency and state monitoring and analytical requirements during the previous calendar year except that:

(a) Where a system is allowed to monitor for regulated contaminants less than once a year, the table(s) must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulations. No data older than five years need be included.

(b) Results of monitoring in compliance with 40 CFR 141.142 and 40 CFR 141.143 need only be included for five years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.

(4) For detected regulated contaminants listed in WAC 246-290-72012, the table(s) must contain:

(a) The MCL for that contaminant expressed as a number equal to or greater than 1.0 (as provided in WAC 246-290-72012);

(b) The MCLG for that contaminant expressed in the same units as the MCL;

(c) If there is no MCL for a detected contaminant, the table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant, and the report must include the definitions for treatment technique and/or action level, as appropriate, specified in WAC 246-290-72004;

(d) For contaminants subject to an MCL, except turbidity and total coliforms, the highest contaminant level used to determine compliance with a National Primary Drinking Water Regulation and the range of detected levels, as follows:

(i) When compliance with the MCL is determined annually or less frequently: The highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

(ii) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point: The highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL.

(iii) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all sampling points: The average and range of detection expressed in the same units as the MCL.

(iv) Note to WAC 246-290-72005 (4)(d): When rounding of results to determine compliance with the MCL is allowed by the regulations, rounding should be done prior to multiplying the results by the factor listed in WAC 246-290-72012;

(e) For turbidity.

(i) When it is reported pursuant to chapter 246-290 WAC Part 6, Subpart C: The highest average monthly value.

(ii) When it is reported pursuant to the requirements of chapter 246-290 WAC Part 6, Subpart D: The highest monthly value. The report should include an explanation of the reasons for measuring turbidity.

(iii) When it is reported pursuant to chapter 246-290 WAC Part 6, Subpart B: The highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in chapter 246-290 WAC Part 6, Subpart B for the filtration technology being used. The report should include an explanation of the reasons for measuring turbidity;

(f) For lead and copper: The 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level;

(g) For total coliform:

(i) The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or

(ii) The highest monthly percentage of positive samples for systems collecting at least 40 samples per month;

(h) For fecal coliform: The total number of positive samples; and

(i) The likely source(s) of detected contaminants to the best of the purveyor's knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments, and should be used when available to the purveyor. If the purveyor lacks specific information on the likely source, the report must include one or more of the typical sources for that contaminant listed in WAC 246-290-72012 which are most applicable to the system.

(5) If a community water system distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the table should contain a separate column for each service area and the report should identify each separate distribution system. Alternatively, systems could produce separate reports tailored to include data for each service area.

(6) The table(s) must clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques and the report must contain a clear and readily understandable explanation of the violation including: The length of the violation, the potential adverse health effects, and actions taken by the system to address the violation. To describe the potential health effects, the system must use the relevant language of WAC 246-290-72012.

(7) For detected unregulated contaminants for which monitoring is required, the table(s) must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72005, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72006 Report contents—Information on Cryptosporidium, radon, and other contaminants. (1)

If the system has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of 40 CFR 141.143 which indicates that Cryptosporidium may be present in the source water or the finished water, the report must include:

(a) A summary of the results of the monitoring; and

(b) An explanation of the significance of the results.

(2) If the system has performed any monitoring for radon which indicates that radon may be present in the finished water, the report must include:

(a) The results of the monitoring; and

(b) An explanation of the significance of the results.

(3) If the system has performed additional monitoring which indicates the presence of other contaminants in the finished water, the department strongly encourages systems to report any results which may indicate a health concern. To determine if results may indicate a health concern, the department recommends that systems find out if the Environmental Protection Agency has proposed a National Primary Drinking Water Regulation or issued a health advisory for that contam-

inant by calling the Safe Drinking Water Hotline (800-426-4791). The Environmental Protection Agency considers detects above a proposed MCL or health advisory level to indicate possible health concerns. For such contaminants, the department recommends that the report include:

- (a) The results of the monitoring; and
- (b) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72006, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72007 Report contents—Compliance with National Primary Drinking Water Regulations. In addition to the requirements of WAC 246-290-72005(6), the report must note any violation that occurred during the year covered by the report of a requirement listed below, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation.

- (1) Monitoring and reporting of compliance data;
- (2) Filtration and disinfection prescribed by chapter 246-290 WAC, Part 6. For systems which have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the report must include the following language as part of the explanation of potential adverse health effects: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
- (3) Lead and copper control requirements prescribed by WAC 246-290-025, specifically CFR 141.80 through 141.91: For systems which fail to take one or more actions prescribed by WAC 246-290-025, specifically CFR 141.80 through 141.84, the report must include the applicable language of WAC 246-290-72012 for lead, copper, or both.
- (4) Treatment techniques for Acrylamide and Epichlorohydrin prescribed by 40 CFR, Subpart K. For systems which violate the requirements of 40 CFR, Subpart K, the report must include the relevant language from WAC 246-290-72012.
- (5) Recordkeeping of compliance data.
- (6) Special monitoring requirements prescribed by WAC 246-290-300(8) (unregulated contaminants) and 246-290-310(3) (sodium); and
- (7) Violation of the terms of a variance, an exemption, or an administrative or judicial order.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72007, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72008 Report contents—Variances and exemptions. If a system is operating under the terms of a variance or an exemption issued under WAC 246-290-060, the report must contain:

- (1) An explanation of the reasons for the variance or exemption;
- (2) The date on which the variance or exemption was issued;

(2003 Ed.)

(3) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and

(4) A notice of any opportunity for public input in the review, or renewal, of the variance or exemption.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72008, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72009 Report contents—Additional information. (1) The report must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. This explanation may include the language of (a) through (c) of this subsection or systems may use their own comparable language. The report also must include the language of (d) of this subsection.

(a) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

(b) Contaminants that may be present in source water include:

(i) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(ii) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(iii) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

(iv) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

(v) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

(c) In order to ensure that tap water is safe to drink, the Environmental Protection Agency and/or the Washington state board of health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and/or the Washington state department of agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

(d) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

[Title 246 WAC—p. 611]

(2) The report must include the telephone number of the owner, operator, or designee of the community water system as a source of additional information concerning the report.

(3) In communities with a large proportion of non-English speaking residents, the report must contain information in the appropriate language(s) regarding the importance of the report or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

(4) The report must include information about opportunities for public participation in decisions that may affect the quality of the water, such as the time and place of meetings.

(5) The systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72009, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72010 Report contents—Required additional health information. All reports must prominently display the following language: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

(1) A system which detects arsenic at levels above 25 micrograms per liter, but below the MCL:

(a) Must include in its report a short informational statement about arsenic, using language such as: EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations.

(b) May write its own educational statement, but only in consultation with the department.

(2) A system which detects nitrate at levels above 5 mg/l, but below the MCL:

(a) Must include a short informational statement about the impacts of nitrate on children using language such as: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue-baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

(b) May write its own educational statement, but only in consultation with the department.

(3) Systems which detect lead above the action level in more than five percent, and up to and including ten percent, of homes sampled:

(a) Must include a short informational statement about the special impact of lead on children using language such as: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for thirty seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

(b) May write its own educational statement, but only in consultation with the department.

(4) Community water systems that detect TTHM above 0.080 mg/l, but below the MCL in WAC 246-290-310(4), as an annual average, monitored and calculated under the provisions of WAC 246-290-300(6), must include health effects language prescribed by WAC 246-290-72012.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72010, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72011 Report delivery and record-keeping. Each community water system must mail or otherwise directly deliver one copy of the report to each customer.

(1) The system must make a good faith effort to reach consumers who do not get water bills. The department expects that an adequate good faith effort will be tailored to the consumers who are served by the system but are not bill-paying customers, such as renters or workers. A good faith effort to reach consumers would include a mix of methods appropriate to the particular system such as: Posting the reports on the internet; mailing to postal patrons in metropolitan areas; advertising the availability of the report in the news media; publication in a local newspaper; posting in public places such as cafeterias or lunch rooms of public buildings; delivery of multiple copies for distribution by single-biller customers such as apartment buildings or large private employers; delivery to community organizations.

(2) No later than the date the system is required to distribute the report to its customers, each community water system must mail a copy of the report to the department, followed within three months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the department.

(3) No later than the date the system is required to distribute the report to its customers, each community water system must deliver the report to any other agency or clearinghouse identified by the department.

(4) Each community water system must make its reports available to the public upon request.

(5) Each community water system serving one hundred thousand or more persons must post its current year's report to a publicly accessible site on the internet.

(6) Any system subject to WAC 246-290-72001 through 246-290-72012 must retain copies of its consumer confidence report for no less than three years.

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72011, filed 7/19/00, effective 8/19/00.]

WAC 246-290-72012 Regulated contaminants.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants						
Total Coliform Bacteria	MCL: (systems that collect \geq 40 samples/ month) 5% of monthly samples are positive; (systems that collect < 40 samples/ month) 1 positive monthly sample		MCL: (systems that collect \geq 40 samples/ month) 5% of monthly samples are positive; (systems that collect < 40 samples/ month) 1 positive monthly sample	0	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and <i>E. coli</i>	0		0	0	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.
Total organic carbon (ppm)	TT	-	TT	n/a	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Turbidity (NTU)	TT.	-	TT	n/a	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Radioactive Contaminants						
Beta/photon emitters (mrem/yr)	4 mrem/yr	-	4	n/a	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Alpha emitters (pCi/l)	15 pCi/l	-	15	n/a	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/l)	5 pCi/l	-	5	n/a	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Inorganic Contaminants						
Antimony (ppb)	.006	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	.05	1000	50	n/a	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos (MFL)	7 MFL	-	7	7	Decay of asbestos cement water mains; Erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	-	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	.004	1000	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium (ppb)	.005	1000	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp mills; Erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Copper (ppm)	AL=1.3	-	AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Cyanide (ppb)	.2	1000	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4	-	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or greater may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Lead (ppb)	AL=.015	1000	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury [inorganic] (ppb)	.002	1000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate (ppm)	10	-	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (ppm)	1	-	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Synthetic Organic Contaminants including Pesticides and Herbicides						
2,4-D (ppb)	.07	1000	70	70	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [Silvex](ppb)	.05	1000	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Acrylamide	TT	-	TT	0	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Alachlor (ppb)	.002	1000	2	0	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	.003	1000	3	3	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAH] (nanograms/l)	.0002	1,000,000	200	0	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
Chlordane (ppb)	.002	1000	2	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	.2	1000	200	200	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate (ppb)	.4	1000	400	400	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Di(2-ethylhexyl) phthalate (ppb)	.006	1000	6	0	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
Dinoseb (ppb)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	.02	1000	20	20	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	1,000,000,000	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.1	1000	100	100	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	.002	1000	2	2	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Epichlorohydrin	TT	-	TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
Ethylene dibromide (ppt)	.00005	1,000,000	50	0	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	1,000,000	400	0	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Heptachlor epoxide (ppt)	.0002	1,000,000	200	0	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	.001	1000	1	0	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclo-pentadiene (ppb)	.05	1000	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate] (ppb)	.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	.0005	1,000,000	500	0	Runoff from landfills; Discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Pentachlorophenol (ppb)	.001	1000	1	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene (ppb)	.003	1000	3	0	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Volatile Organic Contaminants						
Benzene (ppb)	.005	1000	5	0	Discharge from factories; Leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Bromate (ppb)	.010	1000	10	0	By-product of drinking water chlorination	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Carbon tetrachloride (ppb)	.005	1000	5	0	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chloramines (ppm)	MRDL = 4	-	MRDL=4	MRDLG =4	Water additive used to control microbes	Some people who contact drinking water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (ppm)	MRDL = 4	-	MRDL=4	MRDLG =4	Water additive used to control microbes	Some people who contact drinking water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite (ppm)	1	-	1	0.8	By-product of drinking water chlorination	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant mothers who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine dioxide (ppb)	MRDL = .8	1000	MRDL =800	MRDLG = 800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant mothers who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorobenzene (ppb)	.1	1000	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-Dichlorobenzene (ppb)	.6	1000	600	600	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
p-Dichlorobenzene (ppb)	.075	1000	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-Dichloroethylene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	.07	1000	70	70	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene (ppb)	.1	1000	100	100	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	.005	1000	5	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Haloacetic Acids (HAA) (ppb)	.060	1000	60	n/a	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Styrene (ppb)	.1	1000	100	100	Discharge from rubber and plastic factories; Leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
Tetrachloroethylene (ppb)	.005	1000	5	0	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene (ppb)	.07	1000	70	70	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
1,1,1-Trichloroethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb)	.005	1000	5	3	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene (ppb)	.005	1000	5	0	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TTHMs [Total trihalomethanes] (ppb)	0.10/.080	1000	100/80	n/a	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1	-	1	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
Vinyl Chloride (ppb)	.002	1000	2	0	Discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (ppm)	10	-	10	10	Discharge from petroleum factories; Discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Key

AL=Action Level

MCL=Maximum Contaminant Level

MCLG=Maximum Contaminant Level Goal

MFL=million fibers per liter

MRDL=Maximum Residual Disinfectant Level

MRDLG=Maximum Residual Disinfectant Level Goal

mrem/year=millirems per year (a measure of radiation absorbed by the body)

N/A=Not Applicable

NTU=Nephelometric Turbidity Units (a measure of water clarity)

pCi/l=picocuries per liter (a measure of radioactivity)

ppm=parts per million, or milligrams per liter (mg/l)

ppb=parts per billion, or micrograms per liter ($\mu\text{g}/\text{l}$)

ppt=parts per trillion, or nanograms per liter

ppq=parts per quadrillion, or picograms per liter

TT=Treatment Technique

[Statutory Authority: RCW 43.20.050. 00-15-080, § 246-290-72012, filed 7/19/00, effective 8/19/00.]

FEES

WAC 246-290-990 Water system evaluation and project review and approval fees. (1) The fees for the review and approval of water system plans, project reports, construction documents, existing systems, and related evaluations required under chapters 246-290, 246-291, 246-293, 246-294, and 246-295 WAC shall be as follows:

(a) Water system plans required under WAC 246-290-100, 246-290-105, 246-291-140, 246-293-220, 246-293-230, and 246-294-060.

Group A

Project Type	Group B	<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
Water system plan (New and Updated)	\$126	\$447	\$1,095	\$2,070	\$3,363	\$4,978
Minor water system plan alteration	\$30	\$106	\$268	\$515	\$835	\$1,225

(b) Satellite management agency (SMA) plans for Group A and Group B water systems required under WAC 246-295-040.

Total Active or Approved Services

Project Type	<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
SMA plan for ownership (New and Updated)	\$447	\$1,095	\$2,070	\$3,363	\$4,978
SMA approval amendment	\$93 per hour or appropriate fee from category above, whichever is less				
SMA plan for operation only (New and Updated)	\$1,095	\$1,095	\$1,095	\$1,095	\$1,095

Note: SMAs owning water systems and submitting planning documents to the department for review shall be charged only the SMA fee.

(c) New plan elements required under WAC 246-290-100, 246-290-105, 246-290-125, 246-290-132, 246-290-135, 246-290-691, and 246-291-140 including:

(i) Conservation; and

(ii) Wellhead protection, shall be reviewed separately by the department and the fee assessed shall reflect the time spent for this review and shall be calculated based on ninety-three dollars per hour. After the initial submittal, updated information shall be reviewed as part of the updated water system plan and the review fee shall be included in the applicable updated plan review fee listed under (a) or (b) of this subsection.

(d) Project reports required under WAC 246-290-110 and design reports required under WAC 246-291-120.

Group A

Project Type	Group B	<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
All types of filtration or other complex treatment processes	\$317	\$645	\$1,002	\$1,452	\$2,001	\$2,653
Chemical addition only, such as ion exchange, hypochlorination, or fluoridation	\$93	\$187	\$317	\$478	\$675	\$904
Complete water system (an additional fee shall be assessed for review of treatment facility, if any)	\$187	\$447	\$707	\$1,033	\$1,421	\$1,872
System modifications requiring a detailed evaluation to determine whether the system, as modified, will comply with regulations (an additional fee shall be assessed for review of treatment facility, if any)	\$126	\$317	\$515	\$774	\$1,095	\$1,477

Note: In accordance with WAC 246-290-125, project reports are not required for minor projects that are described in sufficient detail in an approved water system plan, and have been reviewed as part of the process for approving the water system plan.

(viii) Filtration pilot study; or
(ix) GWI determination reports, shall be reviewed by the department and the fee assessed shall reflect the time spent for this review and shall be calculated based on ninety-three dollars per hour.

(e) Special reports or plans required under WAC 246-290-230, 246-290-235, 246-290-250, 246-290-470, 246-290-636, 246-290-640, 246-290-654, 246-290-676, 246-291-230 including:

- (i) Corrosion control recommendation report;
- (ii) Corrosion control study;
- (iii) Plan to cover uncovered reservoirs;
- (iv) Predesign study;
- (v) Uncovered reservoir plan of operation;
- (vi) Tracer study plan;
- (vii) Surface water or GWI treatment facility operations plan;

(f) Construction documents required under WAC 246-290-120 and design reports required under WAC 246-291-120.

Public Water Supplies

246-290-990

Project Type	Group B	Group A				
		<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
All types of filtration or other complex treatment processes	\$317	\$645	\$1,002	\$1,452	\$2,001	\$2,653
Chemical addition only, such as ion exchange, hypochlorination, or fluoridation	\$93	\$187	\$317	\$478	\$675	\$904
Complete new water system except treatment (an additional fee shall be assessed for review of treatment facility, if any)	\$256	\$576	\$835	\$1,162	\$1,552	\$2,001
New source only (an additional fee shall be assessed for review of treatment facility, if any)	\$187	\$348	\$478	\$645	\$835	\$1,064
One or more of the following submitted as a package and not requiring a detailed evaluation as determined by the department: Water line installation, booster pump station, modifications to source pumping, piping-valving, controls or storage reservoir (an additional fee shall be assessed for review of treatment facility, if any)	\$126	\$220	\$348	\$515	\$707	\$934
Documents submitted for projects such as water line installation, booster pump stations, pumping, piping/valving, controls or storage reservoirs as determined by the department where such projects: Comply with design standards established by the department; Are prepared by a professional engineer in accordance with WAC 246-290-040; and Do not require a detailed evaluation by the department.	\$60	\$109	\$182	\$256	\$355	\$466

(g) Existing system approval required under WAC 246-290-140 and 246-291-130. For the purpose of this subsection the department shall determine whether a system is expanding or nonexpanding.

Project Type	Group B	Group A				
		<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
NONEXPANDING system not requiring a detailed evaluation by the department	\$244	\$490	\$737	\$984	\$1,231	\$1,477
NONEXPANDING system requiring a detailed evaluation as determined by the department	\$367	\$737	\$1,117	\$1,477	\$1,847	\$2,217
EXPANDING system not requiring a detailed evaluation by the department	\$490	\$984	\$1,477	\$1,970	\$2,464	\$2,956
EXPANDING system requiring a detailed evaluation as determined by the department	\$614	\$1,231	\$1,847	\$2,464	\$3,079	\$3,696

(h) Monitoring waivers requested under WAC 246-290-300.

Project Type	Group B	Group A				
		<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
Inorganic chemical monitoring waiver	Not applicable	\$82 per source	\$113 per source	\$142 per source	\$172 per source	\$202 per source
Organic chemical monitoring waiver	Not applicable	\$148 per source	\$207 per source	\$269 per source	\$328 per source	\$388 per source
Use waiver	Not applicable	\$177 per source	\$238 per source	\$304 per source	\$358 per source	\$418 per source

Project Type	Group B	Group A				
		<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
Area wide waiver renewal	Not applicable	\$177 per source	\$219 per source	\$262 per source	\$304 per source	\$335 per source
Inorganic chemical monitoring waiver renewal	Not applicable	\$45 per source	\$58 per source	\$69 per source	\$82 per source	\$93 per source
Organic chemical monitoring waiver renewal	Not applicable	\$88 per source	\$123 per source	\$161 per source	\$196 per source	\$232 per source
Use waiver renewal	Not applicable	\$123 per source	\$166 per source	\$207 per source	\$249 per source	\$292 per source
Coliform monitoring waiver including departmental inspection requested by purveyor	Not applicable	\$377	\$466	\$593	\$755	Not applicable
Coliform monitoring waiver with third-party inspection report	Not applicable	\$118	\$118	\$118	\$118	Not applicable

(i) Other evaluations and approvals. As applicable, these fees will be charged in addition to the basic fees assessed under (a) through (h) of this subsection.

Project Type	Group B	Group A				
		<100 Services	100 to 500 Services	501 to 999 Services	1,000 to 9,999 Services	10,000 or more Services
Well-site evaluation and approval including the site inspection and hydro-geologic information review.	\$187	\$281	\$332	\$411	\$515	\$645
Regulatory monitoring plan ¹	No plan required	\$182	\$244	\$306	\$367	\$428
Unfiltered system annual comprehensive report	Not applicable	\$367	\$614	\$861	\$1,107	\$1,353

¹A comprehensive document containing coliform, inorganic chemical and organic chemical monitoring plans in accordance with WAC 246-290-300.

Water system compliance report	\$106	\$106	\$106	\$106	\$106	\$106
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(2) To determine the appropriate fee for a noncommunity system, calculate the service equivalent by taking the average population served each day of operation and dividing by twenty-five for a transient noncommunity (TNC) system and two and one-half for nontransient noncommunity (NTNC) system. Use the number of service equivalents to find out what Group A size category to look under and submit the appropriate fee. (All noncommunity systems are Group A systems as described in WAC 246-290-020.)

(3) Additional review and approval fees may be assessed as follows:

(a) The basic fee covers an evaluation, or the review of an initial submittal and one resubmittal if required. If additional resubmittals are required, an additional twenty-five percent of the original fee will be assessed for each additional resubmittal. For water system plan and SMA plan preparation the basic fee also covers a preplanning conference. When the department is asked to participate in other meetings involving the plan such as community meetings, public hearings, or meetings with elected officials, the department is authorized to charge additional fees at the rate of ninety-three dollars per hour;

(b) Fees for department project approval based on local technical review will be determined on a case-by-case basis as outlined in the applicable memorandum of understanding between the department and the respective local agency;

(c) Fees for services which the department determines are not described under subsection (1) of this section, will be calculated based on a rate of ninety-three dollars per hour.

Examples of these services include, but are not limited to:

- (i) Review and inspection of water reuse projects;
- (ii) Collection of water quality samples requested by purveyor;
- (iii) Review of alternate technologies requested by purveyor, manufacturer or authorized representative;
- (iv) Sanitary surveys, including the time spent as part of the annual on-site inspections for systems under WAC 246-290-690(3) that is in addition to the time necessary to assess watershed control and disinfection treatment;
- (v) Well field designations; or
- (vi) Transfers of ownership under WAC 246-290-035 or 246-294-060.

(d) Additional fees assessed by the department shall be billed to the purveyor using an itemized invoice.

(4) If the legislature revises the water system operating permit fee under RCW 70.119A.110 to incorporate into it one or more fees for service currently assessed separately under this section, and the purveyor has paid that consolidated fee, the department shall not assess or collect a separate fee under this section for any such service.

(5) All fees required under this section except as noted in subsection (3) of this section, shall be submitted prior to the department's approval. Payment of fees shall be in the form of a check or money order made payable to: The Department of Health, P.O. Box 1099, Olympia, Washington 98507-1099, or such successor organization or address as designated by the department. Payment of a fee shall not guarantee approval of the submitted document or evaluation request.

(6) Purveyors unable to determine the appropriate fee payment to submit should contact the department.

[Statutory Authority: RCW 43.70.250 and 70.119.160. 02-01-065, § 246-290-990, filed 12/14/01, effective 1/14/02. Statutory Authority: RCW 43.70.250. 00-02-015, § 246-290-990, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-290-990, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.20B.020. 98-11-068, § 246-290-990, filed 5/19/98, effective 6/19/98; 97-12-032, § 246-290-990, filed 5/30/97, effective 6/30/97; 95-20-079, § 246-290-990, filed 10/4/95, effective 11/4/95; 93-01-006 (Order 315), § 246-290-990, filed 12/3/92, effective 1/3/93. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-290-990, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 43.20A.055. 87-14-066 (Order 2493), § 440-44-048, filed 7/1/87; 83-14-038 (Order 1980), § 440-44-048, filed 6/30/83.]

Chapter 246-291 WAC

GROUP B PUBLIC WATER SYSTEMS

WAC

246-291-001	Purpose and scope.
246-291-010	Definitions.
246-291-020	Applicability.
246-291-025	Bottled water.
246-291-030	General administration.
246-291-040	Requirements for engineers.
246-291-050	Enforcement.
246-291-060	Waivers.
246-291-100	Ground water source approval and protection.
246-291-110	Surface water and GWI source approval and protection.
246-291-120	Design report approval.
246-291-130	Existing system approval.
246-291-140	Water system planning requirements.
246-291-200	Design standards.
246-291-210	Distribution systems.
246-291-220	Disinfection of facilities.
246-291-230	Treatment design and operations.
246-291-240	Reliability.
246-291-250	Continuity of service.
246-291-260	Recordkeeping and reporting.
246-291-270	Cross-connection control.
246-291-300	General monitoring requirements.
246-291-310	General follow-up.
246-291-320	Bacteriological.
246-291-330	Inorganic chemical and physical.
246-291-340	Turbidity.
246-291-350	Other substances.
246-291-360	Public notification.
246-291-370	Severability.

WAC 246-291-001 Purpose and scope. (1) The purpose of these rules is to define basic regulatory requirements to protect the health of consumers using Group B public drinking water supplies. These rules are specifically designed to ensure the provision of high quality drinking water in a reliable manner and in a quantity suitable for intended use.

(2) The rules set forth are adopted under chapter 43.20 RCW and owners of Group B public water systems shall be responsible for ensuring compliance with these rules. Other statutes relating to this chapter are:

(a) RCW 43.20B.020, Fees for services—Department of health and department of social and health services;

(b) Chapter 43.70 RCW, Department of health;

(c) Chapter 70.05 RCW, Local health departments, boards, officers—Regulations;

(d) Chapter 70.116 RCW, Public Water System Coordination Act of 1977; and

(e) Chapter 70.119A RCW, Public water systems—Penalties and compliance.

(2003 Ed.)

(3) Prior to expanding a Group B public water system to a Group A public water system, the entire system shall be brought into compliance with chapter 246-290 WAC.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-001, filed 6/22/94, effective 7/23/94.]

WAC 246-291-010 Definitions. Abbreviations:

CSE - comprehensive system evaluation;

GW - ground water under the direct influence of surface water;

m - meter;

MCL - maximum contaminant level;

mg/L - milligrams per liter;

ml - milliliter;

mm - millimeter;

NTU - nephelometric turbidity unit;

psi - pounds per square inch;

umhos/cm - micromhos per centimeter;

VOC - volatile organic chemical;

WFI - water facilities inventory form; and

WHPA - wellhead protection area.

"Authorized agent" means any person who:

Makes decisions regarding the operation and management of a public water system whether or not he or she is engaged in the physical operation of the system;

Makes decisions whether to improve, expand, purchase, or sell the system; or

Has discretion over the finances of the system.

"Coliform sample" means a sample of water collected from the distribution system at or after the first service and analyzed for coliform presence in compliance with this chapter.

"Comprehensive system evaluation (CSE)" means a review, inspection and assessment of a public water system, including, but not limited to: Source; facilities; equipment; operation and administration; maintenance; records; planning documents and schedules; and monitoring, for the purpose of ensuring that safe and adequate drinking water is provided.

"Confirmation" means to demonstrate the results of a sample to be precise by analyzing a repeat sample. Confirmation occurs when analysis results fall within plus or minus thirty percent of the original sample.

"Contaminant" means a substance present in drinking water which may adversely affect the health of the consumer or the aesthetic qualities of the water.

"Cross-connection" means a physical arrangement connecting a public water system, directly or indirectly, with anything other than another potable water system, and capable of contaminating the public water system.

"Department" means the Washington state department of health or health officer as identified in a joint plan of operation in accordance with WAC 246-291-030(1).

"Disinfection" means the use of chlorine or other agent or process the department approves for killing or inactivating microbiological organisms, including pathogenic and indicator organisms.

"Distribution system" means that portion of a public water supply system which stores, transmits, pumps, and distributes water to consumers.

"Expanding public water system" means a public water system installing additions, extensions, changes, or alterations to their existing source, transmission, storage, or distribution facilities which will enable the system to increase in size its existing service area and/or its number of approved service connections.

"Fire flow" means the rate of water flow needed to fight fires under WAC 246-293-640 or adopted city, town, or county standards.

"Generator disconnect" means an electrical circuit arranged to allow connection of a generator to the power supply for the pumping equipment while prohibiting electrical current from flowing back into the main service line.

"Ground water under the direct influence of surface water (GWI)" means any water beneath the surface of the ground, which the department determines has the following characteristics:

Significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*; or

Significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH closely correlating to climatological or surface water conditions.

"Group B water system" means a public water system:

Constructed to serve less than fifteen residential services regardless of the number of people; or

Constructed to serve an average nonresidential population of less than twenty-five per day for sixty or more days within a calendar year; or

Any number of people for less than sixty days within a calendar year.

"Guideline" means a department document assisting the owner in meeting a rule requirement.

"Health officer" means the health officer of the city, county, city-county health department or district, or an authorized representative.

"Hydraulic analysis" means the study of the water system network evaluating water flows within the distribution system under worst case conditions such as, peak hourly design flow plus fire flow, when required. Hydraulic analysis includes consideration of all factors affecting system energy losses.

"Maximum contaminant level (MCL)" means the maximum permissible level of a contaminant in water delivered to any public water system user.

"Maximum contaminant level violation" means a confirmed measurement above the MCL and for a duration of time, where applicable.

"Owner" means any agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or any other entity that holds as property, a public water system.

"Peak hourly design flow" means the maximum rate of water use, excluding fire flow, which can be expected to ever

occur within a defined service area over a sixty minute time period.

"Potable" means water suitable for drinking by the public.

"Pressure zone" means a distribution system whereby an established minimum and maximum pressure range can be maintained without the use of ancillary control equipment (e.g., booster pumps, pressure reducing valves, etc.).

"Primary standards" means standards based on chronic, nonacute, or acute human health effects.

"Public water system" means any system, excluding a system serving only one single-family residence and a system with four or fewer connections all of which serve residences on the same farm, providing piped water for human consumption, including collection, treatment, storage, or distribution facilities used primarily in connection with such system.

"Repeat sample" means a sample collected to confirm the results of a previous analysis.

"Same farm" means a parcel of land or series of parcels which are connected by covenants and devoted to the production of livestock or agricultural commodities for commercial purposes and does not qualify as a Group A water system.

"Secondary standards" means standards based on factors other than health effects such as taste and odor.

"Sell" means to bill separately for drinking water or to include drinking water as part of an itemized listing in a bill delivered to customers, where the amount billed is an increase over what the purveyor pays for water. The presence of centralized source or individual service meters does not affect whether the water is being sold.

"Service" means a connection to a public water system designed to provide potable water.

"Special purpose sample" means a sample collected for reasons other than the monitoring compliance specified in this chapter.

"Standard methods" means the 18th edition of the book, titled *Standard Methods for the Examination of Water and Waste Water*, jointly published by the American Public Health Association, American Water Works Association (AWWA), and Water Pollution Control Federation. This book is available through public libraries or may be ordered from AWWA, 6666 West Quincy Avenue, Denver, Colorado 80235.

"State board of health" and **"board"** means the board created by RCW 43.20.030.

"Surface water" means a body of water open to the atmosphere and subject to surface runoff.

"Volatile organic chemical (VOC)" means a manufactured carbon-based chemical that vaporizes quickly at standard pressure and temperature.

"Water facilities inventory form (WFI)" means the department form summarizing each public water system's characteristics.

"Well field" means a group of wells one system owns or controls which:

Draw from the same aquifer or aquifers as determined by comparable inorganic chemical analysis; and

Discharge water through a common pipe and the common pipe shall allow for collection of a single sample before the first distribution system connection.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-010, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-010, filed 6/22/94, effective 7/23/94.]

WAC 246-291-020 Applicability. (1) The rules of this chapter shall apply to all Group B public water systems except those systems meeting all of the following conditions:

- (a) Consists only of distribution and/or storage facilities and does not have any source or treatment facilities;
- (b) Obtains all water from, but is not owned by, a public water system where the rules of this chapter or chapter 246-290 WAC apply;
- (c) Does not sell water directly to any person;
- (d) Is not a passenger-conveying carrier in interstate commerce; and
- (e) The distribution system is regulated under the Uniform Plumbing Code, chapter 51-26 WAC.

Examples of systems which shall not be exempt include, but are not limited to, water districts, public utility districts, cooperatives, mutuals and associations which serve residential short plats and subdivisions.

(2) Group B public water systems meeting all of the conditions under subsection (1) of this section may be required by the department to comply with such provisions of this chapter as are necessary to resolve a public health concern if the department determines a public health threat exists or is suspected.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-020, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-020, filed 6/22/94, effective 7/23/94.]

WAC 246-291-025 Bottled water. (1) Any water source used for bottling, regardless of size, shall meet the minimum requirements in accordance with chapter 246-290 WAC.

(2) In addition to the requirements imposed by the department, the processing of bottled water is regulated by the state department of agriculture and the United States Food and Drug Administration.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-025, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-025, filed 6/22/94, effective 7/23/94.]

WAC 246-291-030 General administration. (1) The department and the health officer for each local health jurisdiction may develop a joint plan of operation. Responsibility for administering these rules shall remain with the department of health unless there is a joint plan of operation in place. This plan shall:

- (a) List the roles and responsibilities and specifically designate those systems for which the department and local health officer have primary responsibility;
- (b) Provide a list of water system requirements and procedures which the local board of health may waive for systems within its jurisdiction;
- (c) Provide for a level of water system supervision necessary to effectively achieve listed responsibilities;

(2003 Ed.)

(d) Be signed by the department and the local health department or district; and

(e) Be reviewed at least once every five years and updated as needed.

Wherever in these rules the term "department" is used, the term "health officer" may be substituted based on the terms of this joint plan of operation.

(2) The local board of health may adopt rules pursuant to RCW 70.05.060 governing public water systems for which the health officer has assumed primary responsibility. Adopted local board of health rules shall be:

- (a) No less stringent and may be more stringent than this chapter; and
- (b) Revised, if necessary, within twelve months after the effective date of revised state board of health rules. During this time period, existing local rules shall remain in effect, except provisions of the revised state board of health rules which are more stringent than the local board of health rules shall apply.

(3) For residential systems with only two services, the department may eliminate any or all requirements of these rules.

(4) For any residential system, the department may eliminate all ongoing requirements of these rules, except for recordkeeping and reporting requirements under WAC 246-291-260, provided the system has been granted an initial approval or an existing system has been categorized as fully approved/adequate or provisionally approved.

(5) The health officer may approve design reports and water system plans which reflect good engineering practice such as those found in the department guideline titled *Group B Water System Approval*, for those public water systems where the health officer has assumed primary responsibility.

(6) The health officer may allow system owners to substitute results of a calculated fixed radius method and a ten year time of travel criteria instead of using the six hundred foot radius prescribed in WAC 246-291-100 (2)(f) and 246-291-110 (3)(f).

(7) The department may develop and distribute guidelines to clarify sections of the rules as needed.

(8) Fees may be charged by the department of health as authorized in RCW 43.20B.020 and by local health agencies as authorized in RCW 70.05.060 to recover all or a portion of the costs incurred in administering these rules.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-030, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-030, filed 6/22/94, effective 7/23/94.]

WAC 246-291-040 Requirements for engineers. (1) Owners shall ensure that all design reports are prepared by a professional engineer:

- (a) Licensed in the state of Washington under chapter 18.43 RCW; and
 - (b) Having specific expertise regarding design, operation and maintenance of public water systems.
- All documents shall bear the engineer's seal and signature.

(2) Until such date as regulations addressing professional engineering requirements for public water systems take effect after adoption by the state board of registration for

[Title 246 WAC—p. 627]

professional engineers and land surveyors under authority of chapter 18.43 RCW, exceptions to the professional engineer requirement are:

(a) Minor improvements exempted from design report requirements under WAC 246-291-120(1); and

(b) Public water systems serving less than ten service connections consisting of a simple well and pressure tank with one pressure zone and not providing treatment other than simple chlorine disinfection or having special hydraulic considerations, where the local health officer has been delegated authority to:

(i) Approve plans and design reports; or

(ii) Review plans and design reports for completeness prior to forwarding to the department of health for approval.

(3) A "Construction Report For Public Water System Projects" shall be submitted to the department on a department approved form within sixty days of completion and before use of any approved project. The form shall:

(a) Be signed by a professional engineer, or in the case of projects not requiring a professional engineer as outlined in this section, the water system owner;

(b) State that the project is constructed and is completed in accordance with approved design reports; and

(c) State that, in the opinion of the engineer or the water system owner, based on information available, the installation, testing, and disinfection of the system was carried out in accordance with applicable sections of chapters 246-291 and 246-290 WAC.

(4) It shall be the responsibility of the owner to ensure the requirements of this section are fulfilled before the use of any completed project.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-040, filed 6/22/94, effective 7/23/94.]

WAC 246-291-050 Enforcement. (1) When a system is out of compliance with these rules, the department may initiate appropriate enforcement actions, regardless of any prior approvals issued by the department, including, but not limited to:

(a) Issuance of a compliance schedule;

(b) Issuance of departmental orders requiring submission of water system plans, design reports, and construction report forms;

(c) Issuance of departmental orders requiring specific actions or ceasing unacceptable activities within a designated time period;

(d) Issuance of departmental orders to stop work and/or refrain from using any public water system or improvements thereto until all written approvals required by statute or rule are obtained;

(e) Imposition of civil penalties as authorized under chapter 70.119A RCW or local authority where applicable; and

(f) Legal action by the attorney general or local prosecutor.

(2) When enforcing the MCLs under this chapter, the department shall enforce compliance with the primary MCLs as its first priority.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-050, filed 6/22/94, effective 7/23/94.]

[Title 246 WAC—p. 628]

WAC 246-291-060 Waivers. (1) The state board of health or the local health officer in those counties having a joint plan of operation, may grant waivers of the requirements of this chapter, provided that procedures used are consistent with WAC 246-290-060 (5)(b) and in the case where a local health officer is authorized to grant the waiver, procedures used shall be approved by the department of health as part of the joint plan of operation.

(2) Consideration by the board or local health officer of requests for waivers shall not be considered adjudicative proceedings as that term is defined in chapter 34.05 RCW.

(3) Statements and written material regarding the request may be presented to the board or local health officer wherein the application will be considered.

(4) The board or local health officer may grant a waiver if it determines the water system is unable to comply with the requirements and granting of the waiver will not result in an unreasonable risk to the health of consumers. No waivers may be granted for exceedance of a primary MCL.

(5) A waiver granted under this section shall lapse two years from the date of issuance unless the water system project has been completed or an extension is granted.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-060, filed 6/22/94, effective 7/23/94.]

WAC 246-291-100 Ground water source approval and protection. (1) The owner shall ensure that drinking water is obtained from the highest quality source feasible.

Existing sources shall conform to the primary water quality standards established in this chapter. Proposed sources shall conform to the primary and secondary water quality standards established in this chapter and the well construction standards established under chapter 173-160 WAC. The owner shall be responsible for submitting evidence required by the department to determine whether a proposed ground water source is a GWI.

(2) No new source, previously unapproved source, or modification of an existing source shall be used as a drinking water supply without department approval. A party seeking approval shall ensure compliance with WAC 246-291-140 as applicable and provide:

(a) A copy of the water right permit, if required, obtained from the department of ecology for the source, quantity, type, and place of use;

(b) A copy of the source site inspection approval made by the department or local health jurisdiction representative;

(c) Well source development data establishing source capacity. Data shall include static water level, yield, amount of drawdown, recovery rate and duration of pumping. The source shall be pump tested to determine whether the well and aquifer are capable of supplying water at the rate desired and to provide information necessary to determine proper pump settings. A department guideline titled *Group B Water System Approval* is available to assist owners;

(d) Upgradient water uses affecting either water quality or quantity;

(e) A map showing the project location and vicinity including a six hundred foot radius around the well site designating the preliminary short term ground water contribution area;

(2003 Ed.)

(f) A map depicting topography, distances to well or spring from existing property lines, buildings, potential sources of contamination within the six hundred foot radius around the well, and any other natural or man-made features affecting the quality or quantity of water;

(g) The dimensions and location of sanitary control area;

(h) Copies of the recorded legal documents for the sanitary control area;

(i) A copy of the water well report;

(j) A general description of the spring and/or aquifer recharge area affecting the quantity or quality of flow. Seasonal variation shall also be included;

(k) Documentation of totalizing source meter installation;

(l) An initial analysis result of raw water quality from a certified lab, including as a minimum, a bacteriological, complete inorganic chemical and physical analysis of the source water quality;

(m) In areas where the department determines that other contamination may be present, or at the discretion of the department, sample results for these contaminants may be required;

(n) If water quality information from (l) and (m) of this subsection shows a contaminant level of concern, the department may require further action by the owner; and

(o) If water quality results taken from the proposed source confirm a primary MCL violation, the owner shall ensure that appropriate treatment is provided.

(3) The owner shall contact the department before developing or modifying a source, to identify any additional requirements the department deems necessary.

(4) Sanitary control area.

(a) The owner shall ensure that a sanitary control area is maintained around all sources for the purpose of protecting them from existing and potential sources of contamination. A department guideline titled *Group B Water System Approval* describes activities which should be precluded within the sanitary control area and is available from the department on request.

(b) The minimum sanitary control area shall have a radius of one hundred feet (thirty meters) for wells, and two hundred feet (sixty meters) for springs, unless engineering justification supports a smaller area. The justification must address geological and hydrological data, well construction details and other relevant factors necessary to assure adequate sanitary control.

(c) The department may require a larger sanitary control area if geological and hydrological data support such a decision. It shall be the owner's responsibility to obtain the protection needed.

(d) No source of contamination may be constructed, stored, disposed of, or applied within the sanitary control area without the permission of the department and the system owner.

(e) The sanitary control area shall be owned in fee simple, or the owner shall have the right to exercise complete sanitary control of the land through other legal provisions.

(f) The owner shall obtain a duly recorded restrictive covenant which shall run with the land, restricting the use of said land in accordance with these rules.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-100, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-100, filed 6/22/94, effective 7/23/94.]

WAC 246-291-110 Surface water and GWI source approval and protection. (1) The owner shall ensure that drinking water is obtained from the highest quality source feasible. Existing sources shall conform to the primary water quality standards established in this chapter. Proposed sources shall conform to the primary and secondary water quality standards established in this chapter. The owner shall be responsible for submitting evidence required by the department to determine whether a proposed ground water source is a GWI.

(2) No new source, previously unapproved source, or modification of an existing source shall be used as a drinking water supply without department approval. As of the effective date of these rules, the department shall no longer approve new or expanding surface water or GWI sources unless the department determines they meet the following conditions:

(a) The system is under the ownership and operation of a department of health approved satellite management agency; and

(b) Continuous effective treatment, including filtration, disinfection and any other measures required under chapter 246-290 WAC are provided.

(3) An owner seeking source approval shall provide the department:

(a) A copy of the water right permit, if required, obtained from the department of ecology for the source, quantity, type, and place of use;

(b) A copy of the source site inspection approval made by the department or local health jurisdiction representative;

(c) Upgradient water uses affecting either water quality or quantity;

(d) A map showing the project location and vicinity;

(e) A map depicting topography, distances to the surface water intake or GWI source from existing property lines, buildings, potential sources of contamination, ditches, drainage patterns, and any other natural or man-made features affecting the quality or quantity of water;

(f) For GWI sources:

(i) A map depicting topography, distances to well or spring from existing property lines, buildings, potential sources of contamination within the six hundred foot radius around the well, and any other natural or man-made features affecting the quality or quantity of water;

(ii) Copies of the recorded legal documents for the sanitary control area;

(iii) A copy of the water well report if applicable;

(iv) A general description of the recharge area affecting the quantity or quality of flow. Seasonal variation shall also be included;

(v) Well development data establishing source capacity. Data shall include static water level, yield, amount of draw-down, recovery rate and duration of pumping. The source shall be pump tested to determine whether the well and aquifer are capable of supplying water at the rate desired and to provide information necessary to determine proper pump set-

tings. A department guideline titled *Group B Water System Approval* is available to assist owners.

Existing and proposed sources shall conform to the well construction standards established under chapter 173-160 WAC if applicable.

(g) Documentation of totalizing source meter installation;

(h) An initial analysis result of raw water quality from a certified lab, including as a minimum, a bacteriological, and complete inorganic chemical and physical analysis of the source water quality;

(i) In areas where the department determines that other contamination may be present, or at the discretion of the department, sample results for these contaminants may also be required;

(j) If water quality information from (h) and (i) of this subsection shows a contaminant level of concern, the department may require further action by the owner; and

(k) If water quality results taken from the proposed source confirm a primary MCL violation, the owner shall ensure that appropriate treatment is provided which shall eliminate the public health risk to consumers served by the system.

(4) Watershed control program.

(a) Owners of new or expanding surface water or GWI sources shall ensure the development and submittal of a watershed control program to the department for review and approval. Once approved, the owner shall implement the program.

(b) This program shall be part of the water system plan required in WAC 246-291-140.

(c) The owner's watershed control program shall contain, at a minimum, the following elements:

(i) Watershed description and inventory, including location, hydrology, land ownership and activities which may adversely affect water quality;

(ii) Watershed control measures, including documentation of ownership and relevant written agreements, monitoring procedures and water quality;

(iii) System operation, including emergency provisions; and

(iv) Documentation of water quality trends.

Sections in the department guideline titled *Planning Handbook* and in the *DOH SWTR Guidance Manual* address watershed control and are available to owners.

(d) The owner shall ensure submittal of the watershed control program to the department for review and approval. Following department approval, the owner shall ensure implementation as approved.

(e) The owner shall update the watershed control program at least every six years, or more frequently if required by the department.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-110, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-110, filed 6/22/94, effective 7/23/94.]

WAC 246-291-120 Design report approval. (1) Design reports shall be submitted to the department for written approval prior to installation of any new water system, or

[Title 246 WAC—p. 630]

water system extension or improvement with the following exceptions:

(a) Installation of valves, fittings, and meters;

(b) Repair of a system component or replacement with a similar component of the same capacity; and

(c) Maintenance or painting of surfaces not contacting potable water.

(2) Design reports submitted for approval by owners of systems required to have a water system plan, will not be considered for approval unless there is a current approved water system plan and the plan adequately addresses the project.

(3) Design reports shall include, at a minimum, the following:

(a) Alternatives. Verify contacts with other water system owners as applicable in accordance with WAC 246-291-140(2);

(b) Legal considerations. Identify legal aspects such as ownership, right-of-way, sanitary control area, and restrictive covenants;

(c) Engineering calculations. Describe how the project complies with the design considerations;

(d) Drawings. Include detailed drawings of each project component;

(e) Material specifications. List detailed material specifications for each project component;

(f) Construction specifications. List detailed construction specifications and assembly techniques for carrying out the project;

(g) Testing. Identify testing criteria and procedures for each applicable portion of the project;

(h) Disinfection. Identify specific disinfection procedures which must conform with American Water Works Association standards or other standards acceptable by the department;

(i) Inspection. Identify provisions for inspection of the installation of each project component. See WAC 246-291-040 for construction reporting requirements; and

(j) Change orders. All changes except for minor field revisions must be submitted to and approved by the department in writing.

(4) Approval of design reports shall be in effect for two years unless the department determines a need to withdraw the approval. An extension of the approval may be obtained by submitting a status report and a written schedule for completion. Extensions may be subject to additional terms and conditions imposed by the department.

[Statutory Authority: RCW 43.20.050, 94-14-002, § 246-291-120, filed 6/22/94, effective 7/23/94.]

WAC 246-291-130 Existing system approval. (1) At the discretion of the department, owners of existing systems without approved design reports shall, as determined by the department, provide information necessary to establish the extent of the water systems compliance with this chapter.

(2) After receipt of the required data, the department shall review the information and place the system into one of the following categories:

(a) Fully approved/adequate. A fully approved system has been found to be in full compliance with these regulations and may add services if designed accordingly; or

(2003 Ed.)

(b) Provisionally adequate. A provisionally adequate system complies with applicable MCL and treatment standards, fire flow requirements where applicable, and meets a twenty psi minimum pressure requirement under peak hourly design flow conditions but may not be in compliance with other regulatory requirements. A provisionally adequate system is considered satisfactory for its existing services, but may not expand to supply additional services; or

(c) Inadequate. Any system not identified in (a) or (b) of this subsection. The system is considered unsatisfactory and no additional service connections can be made to an inadequate system.

(3) After categorizing the system, the department shall notify the owner in writing of the following:

(a) The system's category;

(b) The relationship of the system's category with respect to adding service connections and potential comments on status request letters; and

(c) If the system is not fully approved, what additional actions the owner needs to complete before a full or provisional approval is granted.

(4) The department is authorized to take enforcement actions in accordance with WAC 246-291-050.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-130, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-130, filed 6/22/94, effective 7/23/94.]

WAC 246-291-140 Water system planning requirements. (1) Water system plan.

(a) The water system plan shall:

(i) Identify present and future needs;

(ii) Set forth means for meeting those needs; and

(iii) Do so in a manner consistent with other relevant plans and local, state, and federal laws.

(b) Owners of the following categories of systems shall ensure the development and submittal of a water system plan for review and approval by the department:

(i) All systems as required by chapter 70.116 RCW the Public Water System Coordination Act of 1977 and chapter 246-293 WAC;

(ii) Any system experiencing problems related to planning, operation, and/or management as determined by the department and outlined in a departmental order;

(iii) Any proposed or expanding system as determined by the department; and

(iv) Any system which installs treatment, other than simple chlorination disinfection equipment, after the effective date of these regulations.

(c) A department guideline titled *Group B Water System Approval* is available from the department to assist owners in developing this plan. Design reports may be combined with a water system plan. To the extent to which they are applicable, the water system plan shall address the following elements:

(i) Description of system management and ownership;

(ii) Description of appropriate water quality monitoring and reporting requirements;

(iii) Service area and identification of existing and proposed major facilities;

(iv) Maximum number of connections the system can safely and reliably support;

(v) Water conservation program. Systems which are developed or expanded after the effective date of this rule shall develop a conservation program;

(vi) Relationship and compatibility with other plans;

(vii) Description of water source(s) including compliance with applicable source approval and protection under WAC 246-291-100 and 246-291-110;

(viii) Source protection (including required protective covenants, wellhead protection and watershed control where applicable); and

(ix) Financial viability.

(2) Prior to developing a new water system, the developer of the proposed system shall follow the steps listed below as applicable:

(a) The developer shall ensure that the new system is owned or operated by a department-approved satellite management agency (SMA), or if a department-approved SMA is not available, that the proposed new system has a department-approved water system plan in accordance with WAC 246-291-140;

(b) Department approval of any system created after July 22, 1995, that is not owned or operated by a SMA shall be conditioned upon future management or ownership by a SMA, if such management or ownership can be made with reasonable economy and efficiency, or upon periodic review of the system's operational history to determine its ability to meet the department's financial viability and other operating requirements.

(c) If the proposed system is located within the boundaries of a critical water supply service area, the ability to develop an independent system shall be governed by the provisions of the Public Water System Coordination Act, chapter 70.116 RCW and chapter 246-293 WAC, and will be subject to the jurisdictional coordinated water system plan; or

(d) If the proposed system consists of a surface water or GWI source, ensure that the proposed system will be owned and operated by a department-approved satellite system management agency.

(3) For systems approved after the effective date of these rules, a summary of the following shall be recorded, by the system owner, on all affected property titles as a means of providing information about the system to property owners, lending institutions, and other potentially affected parties:

(a) Notice that the property is served by a public water system;

(b) The initial water system plan, planning section of the *Group B Water System Guideline*, or equivalent information from other documents as determined by the department;

(c) Notice that the system is subject to state and local rules;

(d) Recommendation to check with the jurisdictional regulatory authority on the current system status;

(e) Notice that fees may be assessed by the department for providing information on a public water system;

(f) Requirement for satellite management, if applicable;

(g) Notice of any waivers granted to the system; and

(h) Other information required by the department.

[Statutory Authority: RCW 43.20.050, 95-20-078, § 246-291-140, filed 10/4/95, effective 11/4/95; 94-14-002, § 246-291-140, filed 6/22/94, effective 7/23/94.]

WAC 246-291-200 Design standards. (1) Water system owners shall ensure that good engineering practices are used in the design of all public water systems. Information on what is good engineering practice is available from the department in the guideline titled *Group B Water System Approval*.

(2) In addition, owners of new or expanding public water systems shall ensure the following factors are addressed:

(a) Local conditions, plans and/or regulations;

(b) Public Water System Coordination Act considerations where appropriate; and

(c) Other requirements as determined by the department.

(3) Any pipe, pipe fittings, solder, or flux used in the installation or repair of a public water system shall be lead-free. Within the context of this section, lead-free shall mean having no more than eight percent lead in pipes and pipe fittings, and no more than two-tenths of one percent lead in solder and flux. This prohibition shall not apply to leaded joints necessary for the repair of cast iron pipes.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-200, filed 6/22/94, effective 7/23/94.]

WAC 246-291-210 Distribution systems. (1) All distribution reservoirs shall have suitable watertight roofs or covers preventing entry by birds, animals, insects, and dust and shall include appropriate provisions to safeguard against trespass, vandalism, and sabotage. All new distribution reservoirs shall be able to be drained by gravity to daylight.

(2) The owner shall ensure that the distribution system is sized and evaluated using a hydraulic analysis acceptable to the department.

(3) Systems designed to provide fire hydrants shall have a minimum distribution main size of six inches (150 mm).

(4) New water systems or additions to existing systems shall provide a design quantity of water at a positive pressure of at least thirty psi throughout the system under peak hourly design flow conditions measured at any customer's water meter or at the property line if no meter exists.

(5) If fire flow is to be provided, the distribution system shall be designed to provide the required fire flow at a pressure of at least twenty psi throughout the system during peak hourly design flow conditions.

(6) Booster pumps needed for individual services shall be subject to review and approval by the department. Installation shall be made under the supervision of the owner to ensure cross-connection control requirements are met. Installation of booster pumps which are an integral part of the system design shall be inspected and certified by the engineer.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-210, filed 6/22/94, effective 7/23/94.]

WAC 246-291-220 Disinfection of facilities. No portion of a public water system containing potable water shall be put into service, nor, if service has been terminated, shall service resume, until the facility has been effectively disinfected. The procedure used for disinfection shall conform to the American Water Works Association standards or other standards acceptable to the department. In cases of new construction, drinking water shall not be furnished to the con-

sumer until satisfactory bacteriological samples have been analyzed by a laboratory certified by the state.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-220, filed 6/22/94, effective 7/23/94.]

WAC 246-291-230 Treatment design and operations.

(1) Finished water quality from existing and proposed sources of supply shall conform to the minimum water quality standards established in this chapter.

(2) Predesign studies shall be required for proposed surface water and GWI treatment and may be required for ground water treatment. The goal of the predesign study shall be to establish the most acceptable method to produce satisfactory finished water quality.

(3) Treatment of ground water sources shall be as determined by the department.

(4) The minimum level of treatment for new or expanding surface water and GWI sources approved after the effective date of these regulations shall be coagulation, flocculation, filtration, and disinfection unless otherwise approved by the department.

(5) The minimum level of treatment for existing nonexpanding surface water and GWI sources approved prior to the effective date of these regulations shall be filtration and disinfection.

(6) Disinfection methods, other than chlorination, i.e., ozonation or ultraviolet radiation, may be approved by the department with appropriate engineering justification.

(7) The owner shall ensure that the system is operated in accordance with good operations procedures such as those listed in the department guideline titled *Group B Water System Approval*.

(8) The owner shall ensure that no bypass is established or maintained to divert water around any feature of a treatment process, except by written approval from the department.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-230, filed 6/22/94, effective 7/23/94.]

WAC 246-291-240 Reliability. (1) All public water systems shall provide an adequate quantity and quality of water in a reliable manner.

(a) In determining whether a proposed public water system or an expansion or modification of an existing system is capable of providing an adequate quantity of water, the department shall consider the immediate as well as the reasonably anticipated future needs of the system's consumers.

(b) In determining whether an existing public water system is providing an adequate quantity of water, the department shall consider the needs of the system's existing consumers exclusively, unless, in the department's discretion, consideration of the needs of potential consumers is in the public interest.

(2) The owner shall ensure the system is constructed, operated, and maintained to protect against failures. New and expanding systems shall be equipped with a generator disconnect. Security measures shall be employed to assure the water source, water treatment processes, water storage facilities, and the distribution system are under the strict control of the owner.

(3) Where fire flow is required, a positive pressure shall be maintained throughout the system under fire flow conditions.

(4) Water pressure at the customer's service meter or property line if a meter is not used, shall be maintained at the approved design pressure under peak hourly design flow conditions.

(5) No intake or other connection shall be maintained between a public water system and a source of water not approved by the department.

(6) Owners shall provide the department with the current names, addresses, and telephone numbers of the owners, operators, and emergency contact persons for the system, including any changes to this information. The owner shall ensure that customer concerns and service complaints are responded to in a timely manner.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-240, filed 6/22/94, effective 7/23/94.]

WAC 246-291-250 Continuity of service. (1) No owner shall transfer system ownership without providing written notice to the department and all customers. Notification shall include a time schedule for transferring responsibilities, identification of the new owner, and under what authority the new ownership will operate. If the system is a corporation, identification of the registered agent shall also be provided.

(2) The system transferring ownership shall ensure all health-related standards are met during transfer and shall inform and train the new owner regarding operation of the system.

(3) No owner shall end utility operations without providing written notice to all customers and the department at least one year prior to termination of service.

(4) Nothing in these rules shall prohibit an owner from terminating service to a specific customer if the customer fails to pay normal fees for service in a timely manner or if the customer allows or installs an unauthorized service connection to the system.

(5) Where this section may be in conflict with existing state statutes, the more stringent statute shall prevail.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-250, filed 6/22/94, effective 7/23/94.]

WAC 246-291-260 Recordkeeping and reporting. (1) The owner shall ensure that the following records of operation and water quality analyses are kept on file:

(a) Records of bacteriological and turbidity analyses shall be kept for five years. Records of chemical analyses shall be kept for as long as the system is in operation. Other records of operation and analyses required by the department shall be kept for three years. All records shall bear the signature of the owner of the water system or his or her representative.

(b) Records of action taken by the system to correct violations of primary drinking water regulations and copies of public notifications shall be kept for three years after the last action taken with respect to the particular violation involved.

(c) Copies of any written reports, summaries, or communications, relating to comprehensive system evaluations

(CSEs) conducted by system personnel, by a consultant or by any local, state, or federal agency, shall be kept for ten years after completion of the CSE involved.

(d) Where applicable, records of operation and analyses shall include the following:

(i) Daily chlorine residual;

(ii) Water treatment plant performance including, but not limited to:

(A) Type of chemicals used and quantity;

(B) Amount of water treated; and

(C) Results of analyses.

(iii) Daily turbidity;

(iv) Monthly water use readings from totalizing source meters; and

(v) Other information as specified by the department.

(2) Reporting.

(a) The owner shall ensure that reports required by this chapter, are submitted to the department when requested by the department or as otherwise required by this section, including tests, measurements, and analytic reports.

(b) Water facilities inventory and report form (WFI).

(i) Owners shall ensure the submittal of an updated WFI to the department every three years or as requested; and

(ii) The owner shall also ensure the submittal of an updated WFI to the department within thirty days of any change in name, number of connections, ownership, or responsibility for management of the water system.

(c) Bacteriological.

(i) The owner shall ensure that the department is notified of the presence of:

(A) Coliform in a sample, within ten days of notification by the laboratory; and

(B) Fecal coliform or E. coli in a sample, by the end of the business day in which the owner is notified by the laboratory or as soon as possible.

(ii) When a coliform MCL violation occurs, the owner shall ensure that the following notifications are made:

(A) Notification of the department before the end of the next business day when a coliform MCL is determined; and

(B) Notification of the water system users in accordance with WAC 246-291-360.

(d) Water use data shall be reported upon request of the department.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-260, filed 6/22/94, effective 7/23/94.]

WAC 246-291-270 Cross-connection control. (1) Owners have the responsibility to protect public water systems from contamination due to cross-connections.

(2) Cross-connections which can be eliminated shall be eliminated. The owner shall work cooperatively with local authorities to eliminate or control potential cross-connections in a manner acceptable to the department.

(3) When an existing cross-connection poses a potential health or system hazard, the owner shall shut off water service to the premises until the cross-connection has been eliminated or controlled by the installation of a proper backflow prevention assembly.

(4) Backflow prevention devices shall be approved by the department and tested in a manner prescribed by the department in WAC 246-290-490.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-270, filed 6/22/94, effective 7/23/94.]

WAC 246-291-300 General monitoring requirements. (1) The department may require additional monitoring when it determines contamination is present or suspected in the water system or when it determines the source may be vulnerable to contamination.

(2) Special purpose samples shall not count toward fulfillment of the monitoring requirements of this chapter.

(3) The owner shall ensure samples required by this chapter are collected, transported, and submitted for analysis according to department-approved methods. The analyses shall be performed by the state public health laboratory or another laboratory certified by the department. Qualified water utility, certified laboratory, or department personnel may conduct measurements for pH, temperature, residual disinfectant concentration and turbidity as required by this chapter, provided, these measurements are made in accordance with *Standard Methods*.

(4) When one Group B water system sells water to another public water system and the cumulative number of services or population served meet the definition of a Group A system, the owner of the selling system shall ensure that source monitoring is conducted in accordance with the minimum requirements for Group A community systems found in chapter 246-290 WAC.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-300, filed 6/22/94, effective 7/23/94.]

WAC 246-291-310 General follow-up. (1) If a water quality sample exceeds any MCLs listed in this chapter, the owner shall ensure notification of the department and take follow-up action as described in this chapter.

(2) When a primary MCL violation occurs, the owner shall ensure that the following actions are taken:

(a) Notification of the department in accordance with WAC 246-291-260;

(b) Notification of the consumers served by the system in accordance with WAC 246-291-360;

(c) Determination of the cause of the contamination; and

(d) Other action as directed by the department.

(3) When a secondary MCL violation occurs, the owner shall ensure that the department is notified and that action is taken as directed by the department.

(4) The department shall determine the follow-up action when a substance not included in this chapter is detected.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-310, filed 6/22/94, effective 7/23/94.]

WAC 246-291-320 Bacteriological. (1) Owners shall ensure the collection and submittal of a sample for coliform analysis at least once every twelve months from the furthest end of the distribution system or as directed by the department.

[Title 246 WAC—p. 634]

(2) When coliform bacteria are present in any sample the owner shall ensure that:

(a) The sample is analyzed for fecal coliform or E. coli;

(b) The department is notified in accordance with WAC 246-291-260; and

(c) Further action is taken as directed by the department.

(3) MCLs.

(a) MCLs under this subsection shall be considered primary standards.

(b) An MCL violation for coliform bacteria occurs when a routine and repeat sample have coliform presence.

(c) In determining MCL compliance, the owner shall:

(i) Include:

(A) Routine samples; and

(B) Repeat samples.

(ii) Not include:

(A) Invalidated samples; and

(B) Special purpose samples.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-320, filed 6/22/94, effective 7/23/94.]

WAC 246-291-330 Inorganic chemical and physical.

(1) Monitoring.

(a) A complete inorganic chemical and physical analysis shall consist of the primary and secondary chemical and physical standards.

(i) Primary chemical and physical standards are antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate (as N), nitrite (as N), selenium, sodium, thallium, and turbidity.

(ii) Secondary chemical and physical standards are chloride, color, hardness, iron, manganese, silver, specific conductivity, sulfate*, total dissolved solids*, and zinc.

*Required only when specific conductivity exceeds seven hundred micromhos/centimeter.

(b) Samples taken for inorganic chemical analyses shall be collected at the source before treatment.

(c) Owners shall ensure submittal of at least one initial complete analysis from each source or well field;

(d) After the initial complete analysis, owners shall ensure submittal to the department of results of at least one nitrate sample analyzed from each source or well field every thirty-six months; and

(e) When treatment is provided for one or more inorganic chemical or physical contaminants, samples shall be taken for the specific contaminant or contaminants before and after treatment. The department shall determine the frequency of sampling.

(2) Follow-up. When an initial analysis of a substance exceeds the MCL, the owner shall ensure that at least one additional sample is immediately taken from the same sampling point and analyzed for any substance which exceeded the MCL. If the average of the samples exceeds the MCL, a violation is confirmed.

(3) MCLs. The primary and secondary MCLs are listed in Tables 1 and 2

Table 1
INORGANIC CHEMICAL CHARACTERISTICS

Substance	Primary MCLs (mg/L)
Antimony	0.006
Arsenic	0.05
Barium	2.0
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2
Fluoride	4.0
Mercury	0.002
Nickel	0.1
Nitrate (as N)	10.0
Nitrite (as N)	1.0
Selenium (Se)	0.05
Sodium (Na)	*
Thallium	0.002

Substance	Secondary MCLs (mg/L)
Chloride (Cl)	250.0
Fluoride (F)	2.0
Iron (Fe)	0.3
Manganese (Mn)	0.05
Silver (Ag)	0.1
Sulfate (SO ₄)	250.0
Zinc (Zn)	5.0

Note: Although the state board of health has not established an MCL for sodium, there is enough public health significance connected with sodium levels to require inclusion in inorganic chemical and physical monitoring.

Table 2
PHYSICAL CHARACTERISTICS

Substance	Primary MCL
Turbidity	1-0 NTU

Substance	Secondary MCLs
Color	15 Color Units
Hardness	None established
Specific Conductivity	700 umhos/cm
Total Dissolved Solids (TDS)	500 mg/L

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-330, filed 6/22/94, effective 7/23/94.]

WAC 246-291-340 Turbidity. (1) The department shall determine monitoring requirements on a case-by-case basis. New surface water and GWI sources shall comply with applicable turbidity monitoring requirements in accordance with Part 6 of chapter 246-290 WAC.

(2) MCLs.

(a) The department shall consider standards under this subsection primary standards.

(b) The MCLs for turbidity are:

(i) 1.0 NTU, based on a monthly average of the maximum daily turbidity, where the maximum daily turbidity is defined as the average of the:

(A) Highest two hourly readings over a twenty-four-hour period when continuous monitoring is used; or

(B) Daily grab samples taken within one hour when daily monitoring is used.

The department may increase the MCL to 5.0 NTUs if the owner can show the source is within a controlled watershed and the source meets the requirements under WAC 246-291-110.

(ii) 5.0 NTUs based on an average of the maximum daily turbidity for two consecutive days.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-340, filed 6/22/94, effective 7/23/94.]

WAC 246-291-350 Other substances. (1) In areas known or suspected of being contaminated with other substances of public health concern, the department may require that an owner submit water samples to test for the suspected contamination at a frequency determined by the department.

(2) The department may require repeat samples for confirmation of results.

(3) Any substance confirmed in a water system that does not have an MCL listed in this chapter shall be subject to the MCLs, state advisory levels (SALs) and other provisions found in chapter 246-290 WAC.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-350, filed 6/22/94, effective 7/23/94.]

WAC 246-291-360 Public notification. (1) Responsibility. Within fourteen days of the violation, the owner shall ensure that water system users are notified when the system has a violation of a primary MCL.

(2) Content. Notices shall provide:

(a) A clear, concise, and simple explanation of the violation;

(b) Discussion of potential adverse health effects and any segments of the population that may be at higher risk;

(c) A list of steps the owner has taken or is planning to take to remedy the situation;

(d) A list of steps the consumer should take, including advice on seeking an alternative water supply if necessary;

(e) The owner's and manager's names and phone numbers; and

(f) When appropriate, notices shall be multilingual.

The owner may provide additional information to further explain the situation.

(3) Distribution. Owners shall ensure that a written notice is distributed to all water system users within fourteen days of a violation unless otherwise directed by the department.

(4) When circumstances dictate the owner give a broader or more immediate notice to protect public health, the department may require notification by whatever means necessary.

(5) When a system is granted a waiver for reduction of water quality standards, the owner shall ensure that customers are notified. The owner shall provide a notice annually and send a copy to the department.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-360, filed 6/22/94, effective 7/23/94.]

WAC 246-291-370 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected.

[Statutory Authority: RCW 43.20.050. 94-14-002, § 246-291-370, filed 6/22/94, effective 7/23/94.]

Chapter 246-292 WAC

WATER WORKS OPERATOR CERTIFICATION

WAC

246-292-001	Purpose.
246-292-010	Definitions.
246-292-020	General system requirements.
246-292-040	Classification of public water systems.
246-292-050	Minimum certification requirements for public water systems.
246-292-055	Minimum requirements for contract operators.
246-292-060	Minimum education and experience requirements for water works operators.
246-292-070	Application and examination.
246-292-075	Reciprocity.
246-292-080	System temporary operator certification.
246-292-085	Grandparenting.
246-292-090	Renewal of certificates.
246-292-100	Revocation and suspension.
246-292-110	Enforcement.
246-292-160	Water works certification fees.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-292-030	Certification board. [Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-030, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-030, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-040, filed 9/22/78.] Repealed by 96-19-041, filed 9/12/96, effective 10/13/96. Statutory Authority: RCW 43.70.040.
246-292-120	Purpose. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-120, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 82-24-070 (Order 1917), § 248-55-210, filed 12/1/82.] Repealed by 94-04-004, filed 1/20/94, effective 2/20/94. Statutory Authority: Chapter 70.119 RCW.
246-292-130	Notice of decision—Adjudicative proceeding. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-130, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.119.050. 90-06-019 (Order 039), § 248-55-220, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.119.050. 82-24-070 (Order 1917), § 248-55-220, filed 12/1/82.] Repealed by 94-04-004, filed 1/20/94, effective 2/20/94. Statutory Authority: Chapter 70.119 RCW.
246-292-140	Certificate denial—Adjudicative procedure. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-140, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.119.050. 90-06-019 (Order 039), § 248-55-235, filed 2/28/90, effective 3/1/90.] Repealed by 94-04-004, filed 1/20/94, effective 2/20/94. Statutory Authority: Chapter 70.119 RCW.
246-292-150	Certificate suspension, modification, or revocation—Adjudicative procedure. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-150, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.119.050. 90-06-019 (Order 039), § 248-55-240, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 70.119.050. 82-24-070 (Order 1917), § 248-55-240, filed 12/1/82.] Repealed by 94-04-004, filed 1/20/94, effective 2/20/94. Statutory Authority: Chapter 70.119 RCW.

246-292-170 Severability. [Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-170, filed 1/20/94, effective 2/20/94.] Repealed by 01-02-070, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921.

246-292-990 Waterworks operator certification fees. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-990, filed 12/27/90, effective 1/31/91. Statutory Authority: 1982 c 201. 82-13-011 (Order 1825), § 440-44-080, filed 6/4/82.] Repealed by 94-04-004, filed 1/20/94, effective 2/20/94. Statutory Authority: Chapter 70.119 RCW.

WAC 246-292-001 Purpose. Pursuant to the provisions of chapter 70.119 RCW, the purpose of this chapter is to protect public health by setting minimum requirements and standards for public water system operation and certification of operators in responsible charge of public water systems. Certification under this chapter is available to all operators who can meet the minimum qualifications of a given classification.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-001, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-001, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-001, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-010, filed 9/22/78.]

WAC 246-292-010 Definitions. Abbreviations and acronyms:

BAT - backflow assembly tester;
BTO - basic treatment operator;
CCS - cross connection control specialist;
GWI - ground water under the direct influence of surface water;

NTNC - nontransient noncommunity;
OIT - operator-in-training;
SMA - satellite management agency;
TNC - transient noncommunity;
WAC - Washington Administrative Code;
WDM - water distribution manager;
WDS - water distribution specialist;
WTPO - water treatment plant operator;

"Available" means based on system size, complexity, and source water quality, a certified operator must be on-site or able to be contacted as needed to initiate the appropriate action in a timely manner.

"Certificate" means a certificate of competency issued by the department stating that the operator has met the requirements for the specified operator classification of the certification program.

"Certified operator" means a person who has met the applicable requirements of this chapter and holds a valid certificate.

"Complex filtration technology" means conventional, direct, in-line or diatomaceous earth filtration.

"Community water system" means any Group A water system providing service to fifteen or more service connections used by year-round residents for one hundred eighty or more days within a calendar year, regardless of the number of people, or regularly serving twenty-five year-round (i.e., more than one hundred eighty days per year) residents.

Examples of a community water system might include a municipality, subdivision, mobile home park, apartment complex, college with dormitories, nursing home, or prison.

"Continuing education unit (CEU)" means a nationally recognized unit of measurement similar to college credits. One CEU is awarded for every ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction and qualified instruction. Forty-five relevant CEUs equals forty-five relevant college quarter credits or thirty relevant college semester credits as determined by the department.

"Contract operator" means a person in charge of the daily operational activities of three or more public water systems.

"Cross connection control program" means the administrative and technical procedures the owner implements to protect the public water system from contamination via cross-connections as required in WAC 246-290-490.

"Department" means the Washington state department of health, through the secretary of health or the secretary's designee.

"Distribution system" means all piping components of a public water system that serves to convey water from transmission mains linked to source, storage and treatment facilities to the consumer excluding individual services.

"Grandparenting" means the exemption for the existing operator in responsible charge from meeting the initial education, experience and examination requirements for the class of certification the system has been assigned.

"Ground water under the direct influence of surface water (GWI)" means any water beneath the surface of the ground with:

Significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*; or

Significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH closely correlating to climatological or surface water condition.

"Group A water system" means a public water system providing service such that it meets the definition of a public water system provided in the 1996 amendments to the federal Safe Drinking Water Act (Public Law 104-182, Section 101, subsection b). Group A water systems are further defined as community and noncommunity water systems (see other definitions).

"Group B water system" means a public water system with less than fifteen residential connections and serving:

An average of less than twenty-five people per day for sixty or more days within a calendar year; or

Any number of people for less than sixty days within a calendar year.

"Nationally recognized association of certification authorities" means an organization that:

- Serves as an information center for certification activities;

- Recommends minimum standards and guidelines for classification of potable water treatment plants, water distribution systems, wastewater facilities and certification of operators;

(2003 Ed.)

- Facilitates reciprocity between state programs; and
- Assists authorities in establishing new and updating existing certification programs.

"Noncommunity water system" means a Group A water system that is not a community water system. Noncommunity water systems are further defined as nontransient noncommunity (NTNC) and transient noncommunity (TNC).

"Nontransient noncommunity water system (NTNC)" means a Group A water system that provides service to twenty-five or more of the same nonresidential people for one hundred eighty or more days within a calendar year. Examples of a NTNC water system include a school or day care center, or a business, factory, motel or restaurant with twenty-five or more employees on-site.

"Owner" means any agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or any other entity that holds as property, a public water system.

"Operating experience" means the routine on-site performance of duties in a water purification plant or distribution system. Those duties affect plant or system performance and/or water quality.

"Operating shift" means that period of time during which operator decisions are made and actions are taken that will directly impact water quality and/or quantity of drinking water.

"Professional growth reporting period" means a designated time period of not less than three years, in which a certified operator shall demonstrate professional growth.

"Public water system" means any system providing water for human consumption through pipes or other constructed conveyances, excluding a system serving only one single-family residence and a system with four or fewer connections all of which serve residences on the same farm. The term includes:

- Collection, treatment, storage, and/or distribution facilities under control of the owner and used primarily in connection with such systems; and

- Collection or pretreatment storage facilities not under control of the owner, but primarily in connection with such system.

"Purification plant" means that portion of a public water system that treats or improves the physical, chemical or bacteriological quality of the system's water to bring the water into compliance with state board of health standards. Unit processes installed to perform water filtration, ion exchange, electro dialysis, reverse osmosis, or iron and manganese removal shall be included within the scope of the term purification plant. Unit processes installed to allow in-line fluoridation, in-line chlorination, or chemical addition to inhibit corrosion are not included within the scope of the term purification plant.

"Relevant water system training" means directly related to the operation, maintenance or management of a water system; and which has an influence on water quality, public health, or environmental protection.

"Responsible charge" means the operator(s) designated by the owner to be the certified operator(s) who makes the decisions regarding the daily operational activities of a public water system, water treatment facility and/or distribution sys-

tem that will directly impact water quality and/or quantity of drinking water including, but not limited to, decisions concerning process control and system integrity.

"Satellite management agency (SMA)" means a person or entity that is approved by the department to own or operate public water systems on a regional or county-wide basis without the necessity for a physical connection between such systems.

"Service connection" means a connection to a public water system designed to provide water to a single family residence, or other residential or nonresidential population.

"Significant noncomplier" means a system that is violating or has violated department rules, and the violation may create, or has created an imminent or a significant risk to human health. Such violations include, but are not limited to, repeated violations of monitoring requirements, failure to address an exceedance of permissible levels of regulated contaminants, or failure to comply with treatment technique standards or requirements.

"Transient noncommunity (TNC)" means a Group A water system that serves:

- Twenty-five or more different people each day for sixty or more days within a calendar year; or
- Twenty-five or more of the same people each day for sixty or more days, but less than one hundred eighty days within the calendar year.

"Validated exam" means an exam that is independently reviewed by subject matter experts to ensure that the exam is based on a job analysis and related to the classification of the system or facility.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-010, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-010, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-010, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-020, filed 9/22/78.]

WAC 246-292-020 General system requirements. (1)

The following public water systems shall designate the certified operator(s) in responsible charge of the daily operational activities of the public water system, water treatment facility, and/or distribution system that will directly impact water quality and/or quantity of drinking water as required under WAC 246-292-050:

- (a) Group A community or nontransient noncommunity (NTNC) systems; and
 - (b) Group A transient noncommunity (TNC) systems classified as significant noncompliers (SNCs); and
 - (c) Group A transient noncommunity (TNC) systems using a surface water or GWI source.
- (2) Operator certification requirement. Operators in responsible charge of the following public water systems or portions thereof shall be certified:
- (a) Group A community and nontransient noncommunity (NTNC) systems;
 - (b) Group A transient noncommunity (TNC) systems classified as significant noncompliers (SNCs); and
 - (c) Group A transient noncommunity (TNC) systems using a surface water or GWI source.

(3) A designated certified operator shall be in responsible charge and available for each operating shift.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-020, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-020, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-020, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-030, filed 9/22/78.]

WAC 246-292-040 Classification of public water systems.

(1) The department shall classify purification plants according to the Association of Boards of Certification's "Purification Plant Criteria" and set forth in the *Water Works Certification Program Guideline* (guideline). Copies of the guideline are available on request by contacting the Department of Health, Drinking Water Division, Water Works Certification Program P.O. Box 47822, Olympia, Washington 98504-7822.

(2) The department shall classify distribution systems into groups as follows:

Classification	Population Served*
Group S	less than 251
Group 1	251 to 1,500
Group 2	1,501 to 15,000
Group 3	15,001 to 50,000
Group 4	greater than 50,000

* If the population served is not known, apply this formula: Number of Service Connections x 2.5 = Population Served

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-040, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-040, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-040, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-050, filed 9/22/78.]

WAC 246-292-050 Minimum certification requirements for public water systems.

(1) Owners shall have at least one certified operator in responsible charge of the daily operational activities of their system as follows:

- (a) A water treatment plant operator (WTPO) shall be responsible for the operation of:
 - (i) A purification plant with a Class 2 rating or higher;
 - (ii) Any purification plant using complex filtration technology; or
 - (iii) Any unfiltered Group A surface water or GWI system with one hundred or more services in use at any one time.
- (b) A basic treatment operator (BTO) shall be responsible for the operation of:
 - (i) A public water system with a Class 1 purification plant rating; or
 - (ii) An unfiltered Group A surface water or GWI system with less than one hundred services in use at any one time.
- (c) A water distribution manager (WDM) shall be responsible for the operation of a Group A water system:
 - (i) Serving a population greater than two hundred fifty people.
 - (ii) A Class 2 purification plant rating or higher; or

(iii) Any purification plant using complex filtration technology.

(d) A water distribution specialist (WDS) shall be responsible for the operation of:

(i) Group A community or NTNC water systems serving a population of two hundred fifty people or less.

(ii) Group A TNC systems classified as significant non-compliers (SNCs) and not required to provide treatment other than simple disinfection if serving a population of two hundred fifty people or less.

(2) Owners required to develop a cross-connection control program in accordance with WAC 246-290-490 shall ensure that a cross-connection control specialist (CCS) is responsible for:

(a) The system's cross-connection control program;

(b) Initial inspection of premises served by the system, for cross-connections; and

(c) Periodic reinspection of premises served by the system, for cross-connections.

(3) Owners shall ensure that a backflow assembly tester (BAT) is responsible for inspecting, testing, and monitoring backflow prevention assemblies in accordance with WAC 246-290-490.

(4) A WTPO and WDM shall be certified at a level equal to or higher than the water system's classification rating assigned by the department in accordance with WAC 246-292-040.

(5) The certified operator in responsible charge of each operating shift shall be certified at a minimum of one level lower than the classification of the purification plant or distribution system.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-050, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-050, filed 1/20/94, effective 2/20/94. Statutory Authority:

RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-050, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-060, filed 9/22/78.]

WAC 246-292-055 Minimum requirements for contract operators. (1) Contract operators in responsible charge of the daily operational activities of three or more public water systems for operation of a system shall be certified as follows:

(a) At a minimum, a WDM and CCS, with the WDM level determined by the largest public water system operated;

(b) A BTO for public water systems with a Class 1 purification plant rating; and

(c) A WTPO for public water systems with a Class 2 purification plant rating or higher or any purification plant using complex filtration technology.

(2) Contract operators shall be available on a twenty-four-hour per day basis.

(3) Contract operators shall submit two copies of all signed operations contracts to the department within thirty days of the effective date.

(4) Contract operators who are satellite management agencies (SMAs) shall also comply with the provisions of RCW 70.116.134.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-055, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-055, filed 1/20/94, effective 2/20/94.]

WAC 246-292-060 Minimum education and experience requirements for water works operators. Minimum education and operating experience requirements for the following water works operator classifications and levels shall be as indicated in Tables 1A and 1B:

Table 1A

MINIMUM EDUCATION AND OPERATING EXPERIENCE REQUIREMENTS

WATER WORKS OPERATOR CLASSIFICATIONS	LEVEL									
	OPERATOR-IN-TRAINING OIT*		1		2		3		4	
	Education	Operating Experience	Education	Operating Experience	Education	Operating Experience	Education	Operating Experience	Education	Operating Experience
Water Distribution Manager (WDM)	12 years	3 months	12 years	1 year	12 years	3 years	14 years	4 years	16 years	4 years
Water Treatment Plant Operator (WTPO)	12 years	3 months	12 years	1 year	12 years	3 years	14 years	4 years	16 years	4 years

* OIT experience may be fulfilled by three months operating experience or thirty hours of relevant water system training (three CEUs or college credits).

Table 1B

MINIMUM EDUCATION AND OPERATING EXPERIENCE REQUIREMENTS

WATER WORKS OPERATOR CLASSIFICATIONS	Education	Operating Experience
Basic Treatment Operator (BTO)	12 years	6 months
Water Distribution Specialist (WDS)	12 years	6 months

WATER WORKS OPERATOR CLASSIFICATIONS	Education	Operating Experience
Cross-connection Control Specialist (CCS)	12 years	6 months
Backflow Assembly Tester (BAT)	NA	NA

(1) Minimum education requirement shall be the acceptable level of education, or experience which may be substituted for education as outlined in the guideline.

(2) Minimum operating experience requirement shall be the routine on-site performance of duties in a water purification plant or distribution system. Those duties shall affect plant or system performance and/or water quality.

(3) The department may allow substitutions of a person's relevant experience when the person cannot meet the formal education requirement, or vice versa in the WDM, WTPO, BTO, WDS and CCS classifications as outlined in the guideline.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-060, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-060, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-060, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-070, filed 9/22/78.]

WAC 246-292-070 Application and examination. (1) Applicants for any classification of water works operator shall:

(a) Submit a completed application, application fee and examination charge to cover the cost of a validated exam;

(b) Meet the minimum education and operating experience criteria for the level of certification for which they are applying in accordance with WAC 246-292-060; and

(c) Pass a validated examination.

(2) The department shall:

(a) Ensure a validated examination is conducted at least three times annually at convenient places and times as set by the department;

(b) Provide notice of places and times of regularly scheduled examinations; and

(c) Issue applicable certificates to applicants meeting all the conditions for certification.

(3) Applicants who fail or do not appear for their scheduled examination may reapply for a regularly scheduled examination by submitting a new application, application fee and examination charge.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-070, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-070, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-070, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-080, filed 9/22/78.]

WAC 246-292-075 Reciprocity. The department may issue a certification without examination to individuals who possess a certificate from another state or province if:

(1) The applicant possesses a certificate from a state or province having substantially equivalent standards as determined by the department; and

(2) A completed application, application fee and a copy of the valid state or province certificate are submitted to the department.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-075, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-075, filed 1/20/94, effective 2/20/94.]

for certification and shall meet the requirements for a new

WAC 246-292-080 System temporary operator certification. (1) The department may issue temporary certification to an operator without examination if:

(a) The public water system submits:

(i) A letter requesting temporary certification for the operator; and

(ii) The applicable fee.

(b) The operator completes and submits a certification application; and

(c) The operator meets or will meet the minimum education and operating experience requirements of the mandatory classification for the vacated position, prior to the expiration date of the temporary certification.

(2) Only one temporary certification may be issued in each instance of any position vacancy.

(3) The temporary certification shall be valid for up to twelve months.

(4) The temporary certification shall be specific to the designated system and is not transferrable to any other system or operator.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-080, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-080, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-080, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-090, filed 9/22/78.]

WAC 246-292-085 Grandparenting. (1) This section expires two years after its effective date.

(2) The department will allow one existing operator in responsible charge of a public water system to be grandparented for the minimum classification of the water system, if the water system:

(a) Is a Group A system serving less than 100 services that has not been identified as a SNC and is not a GWI or surface water source system.

(b) Is not in violation of any bilateral compliance agreement, or state or federal order; and

(c) Has not had a notice of imposition of penalty issued in the last five years under current ownership.

(3) The owner shall apply for the grandparent certification by completing a department application identifying the operator to be grandparented. The operator identified by the owner must have been in responsible charge of the water system prior to the effective date of this section. Subsequent operators are not eligible for grandparenting.

(4) The operator identified by the owner shall complete and submit an application and application fee in accordance with WAC 246-292-160, Table 2.

(5) No operator may be grandparented for more than two water systems:

(6) A grandparent operator certification is site specific and nontransferrable.

(7) A grandparented operator shall meet all certification renewal requirements under the provisions of WAC 246-292-090; and must complete the first professional growth reporting period by December 31, 2003.

(8) A grandparented operator failing to renew their certification under provisions of WAC 246-292-090 may reapply applicant.

(9) If plant or distribution system classification changes to a higher level, grandparent certification is no longer valid; and the owner and operator shall comply with chapter 246-292 WAC.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-085, filed 12/29/00, effective 1/29/01.]

WAC 246-292-090 Renewal of certificates. (1) The operator certificate shall be renewed by January 1st of each year.

(2) The department shall renew the operator certificate upon payment of the renewal fee and demonstration of professional growth in accordance with subsections (3) and (4) of this section. The applicant shall provide evidence of professional growth acceptable to the department within the designated professional growth reporting period as described in the guideline.

(3) To demonstrate professional growth, a holder of WDM, WTPO, WDS, BTO or CCS certification shall accomplish one of the following activities during each professional growth reporting period:

(a) Accumulate a minimum of three CEU, or college credits relevant to the operation, maintenance, or management of a water system, and which has an influence on water quality, public health or environmental protection;

(b) Advance by examination in the Washington water works operator certification program within the classifications WDM and WTPO to a level 2, 3, or 4; or

(c) Achieve certification by examination in a different classification as shown below:

(i) WDM to WTPO, BTO or CCS;

(ii) WTPO to WDM, or CCS;

(iii) WDS to WDM, WTPO, BTO or CCS;

(iv) BTO to WDM, WTPO, WDS or CCS; or

(v) CCS to WDM, WTPO, BTO, or WDS.

(4) To demonstrate professional growth, a holder of a BAT certification shall satisfactorily complete the department's backflow assembly tester professional growth examination during each professional growth reporting period.

(5) The department shall notify an operator failing to renew the operator certificate by December 31st, that the certificate is temporarily valid for two months beginning January 1st.

(6) A certificate not renewed during the two month period is invalid. The department shall notify the holder of an invalid certificate with notice in writing.

(7) An operator failing to renew their certification under provisions of this section may reapply for certification and shall meet the requirements for a new applicant.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-090, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-090, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-090, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 201, Laws of 1982. 82-13-009 (Order 1823), § 248-55-110, filed 6/4/82. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-110, filed 9/22/78.]

(2003 Ed.)

WAC 246-292-100 Revocation and suspension. (1)

The department may suspend for a specified time or revoke an operator's certificate if the operator:

(a) Obtains a certificate by fraud or deceit;

(b) Demonstrates gross negligence in the operation of a purification plant or a distribution system; or

(c) Intentionally violates the requirements of this chapter or any department rules or orders.

(2) The department shall provide written notice of violation and reasonable opportunity for correction prior to taking action on revocation or suspension of a certificate.

(3) The department shall not initiate action to revoke a certificate until the department has conducted a hearing to consider the appropriateness of revocation.

(4) A revocation or suspension action brought under this section shall be conducted in accordance with RCW 43.70-115, chapter 34.05 RCW, and chapter 246-10 WAC.

(5) A person whose certificate is revoked is not eligible to apply for certification for one year from the effective date of the final order of revocation.

(6) A person whose certificate was revoked and who desires to reapply for a certificate shall apply as a new operator in accordance with WAC 246-292-070.

(7) An operator whose certificate is suspended shall continue to meet all renewal requirements in accordance with WAC 246-292-090 in order to maintain certification.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-100, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-100, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-100, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-120, filed 9/22/78.]

WAC 246-292-110 Enforcement. When any Group A water system or operator is out of compliance with these regulations, the department may initiate appropriate enforcement actions as authorized under chapter 70.119 and 70.119A RCW. These actions may include any one or combination of the following:

(1) Issuance of informal letters instructing or requiring appropriate corrective measures;

(2) Issuance of a compliance schedule;

(3) Issuance of a departmental order;

(4) Issuance of civil penalties for up to five thousand dollars per day per violation;

(5) Prosecution as a criminal misdemeanor with fines up to one hundred dollars per offense;

(6) Revocation or suspension of a license; and

(7) Other legal action by the attorney general or local prosecutor.

[Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-110, filed 12/29/00, effective 1/29/01. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-110, filed 1/20/94, effective 2/20/94. Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-292-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.119.050. 78-10-053 (Order 1343), § 248-55-130, filed 9/22/78.]

WAC 246-292-160 Water works certification fees. (1) Operator fees:

(a) Applicable fees are listed in Table 2 of this section;

[Title 246 WAC—p. 641]

Table 2
WATER WORKS OPERATOR FEES

OPERATOR CLASSIFICATION	APPLICATION FEE	REAPPLICATION FEE	ANNUAL RENEWAL FEE	LATE FEE
WTPO	\$64.00	\$31.00	\$31.00*	\$27.00**
WDM	\$64.00	\$31.00	\$31.00*	\$27.00**
WDS	\$64.00	\$31.00	\$31.00*	\$27.00**
CCS	\$38.00	\$31.00	\$31.00*	\$27.00**
BAT	\$38.00	\$31.00	\$31.00	\$27.00
BTO	\$38.00	\$31.00	\$31.00	\$27.00

* The annual renewal fee for a WTPO, WDM, WDS and CCS certification shall be thirty-one dollars regardless of the number of classifications held.
 ** The annual late fee for a WTPO, WDM, WDS, and CCS certification shall be twenty-seven dollars regardless of the number of classifications held.

(b) A late fee shall be assessed to operators failing to submit the required fee within the time period specified on the renewal form; and

(c) The fee for application for reciprocity is one hundred thirty dollars per classification.

(2) Group A system fees:

(a) Applicable fees are listed as indicated in Table 3 of this section.

Table 3
ANNUAL SYSTEM CERTIFICATION FEES

SYSTEM SIZE* (Number of Equivalent Services)	SYSTEM FEE
Less than 601 Services	\$ 97.00
601 through 6,000 Services	\$ 295.00
6,001 through 20,000 Services	\$ 393.00
More than 20,000 Services	\$ 591.00

* Systems designated by the department as approved satellite management agencies (SMAs) shall pay a fee based on total services in all systems owned by the SMA.

(b) Group A system fees shall be paid in conjunction with the system's annual operating permit fee required in chapter 246-294 WAC.

(c) A late fee shall be assessed against any system for failing to submit the applicable fee to the department within the designated time period. The late fee shall be based on the water system's classification and shall be an additional ten percent of the applicable system fee or twenty-seven dollars, whichever is greater.

(d) The system fee for issuance of a temporary certification shall be sixty-four dollars for each temporary position.

(3) Fees are nonrefundable and transfers of fees are not allowable.

(4) Payment of fees required under this chapter shall be in the form of a check or money order made payable to the department of health and shall be mailed to Department of Health, P.O. Box 1099, Olympia, Washington 98507-1099, or such successor organization or address as designated by the department.

[Statutory Authority: RCW 43.70.250 and 70.119.160. 02-01-065, § 246-292-160, filed 12/14/01, effective 1/14/02. Statutory Authority: Chapter 70.119 RCW and Safe Drinking Water Act, Public Law 104-182; 64 F.R. 5916 - 5921. 01-02-070, § 246-292-160, filed 12/29/00, effective 1/29/01. Statutory Authority: RCW 43.70.250. 00-02-015, § 246-292-160, filed 12/27/99, effective 1/27/00; 99-12-022, § 246-292-160, filed 5/24/99, effective 6/24/99. Statutory Authority: RCW 43.20B.020. 98-12-015, § 246-292-160, filed 5/22/98, effective 6/22/98. Statutory Authority: Chapter 70.119 RCW. 94-04-004, § 246-292-160, filed 1/20/94, effective 2/20/94.]

Chapter 246-293 WAC
WATER SYSTEM COORDINATION ACT

WAC

246-293-001	Purpose.
PART I. PROCEDURAL REGULATIONS	
246-293-110	Definitions.
246-293-120	Preliminary assessment—Requirement.
246-293-130	Preliminary assessment—Procedures.
246-293-140	Declaration of critical water supply service area.
246-293-150	Water utility coordinating committee—Establishment.
246-293-160	Water utility coordinating committee—Purpose.
246-293-170	Establishment of external critical water supply service area boundaries—Procedures.
246-293-180	Establishment of external critical water supply service area boundaries—Criteria.
246-293-190	Establishment of critical water supply service area boundaries—Effect.
246-293-200	Alteration of external critical water supply service area boundaries.
246-293-210	Update of external critical water supply service area boundaries.
246-293-220	Coordinated water system plan—Requirement.
246-293-230	Coordinated water system plan—Water system plan.
246-293-240	Coordinated water system plan—Supplementary provisions.
246-293-250	Service area agreements—Requirement.
246-293-260	Coordinated water system plan—Procedures (water utility coordinating committee).
246-293-270	Coordinated water system plan—Effect.
246-293-280	Coordinated water system plan—Update.
246-293-290	Coordinated water system plan—Local review.
246-293-300	Coordinated water system plan—Department approval.

PART II. RESOLUTION OF SERVICE AREA CONFLICTS

246-293-401	Purpose.
246-293-420	Public hearing.
246-293-430	Initial decision.

PART III. FIRE FLOW

246-293-601	Purpose.
246-293-602	Scope.
246-293-610	Definitions.
246-293-620	Administration.
246-293-630	Application.
246-293-640	Minimum standards for fire flow.
246-293-650	Minimum standards for fire hydrants.
246-293-660	Minimum standards for system reliability.
246-293-670	Alternate methods.
246-293-680	Local standards.
246-293-690	Severability.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

246-293-310	Severability. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-293-310, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 70.116 RCW. 78-07-048 (Order 1309), § 248-56-900, filed 6/28/78.] Repealed by 97-20-101, filed 9/29/97, effective 10/30/97. Statutory Authority: RCW 43.70.040.
246-293-440	Adjudicative proceeding. [Statutory Authority: RCW 43.70.040. 91-02-049 (Order 121), recodified as § 246-293-440, filed 12/27/90, effective 1/31/91. Statutory Authority: Chapter 34.05 RCW, RCW 34.05.220 (1)(a) and 70.116.050. 90-06-019 (Order 039), § 248-59-030, filed 2/28/90, effective 3/1/90. Statutory Authority: RCW 74.116.070 [70.116.070]. 83-01-015 (Order 1919), § 248-59-030, filed 12/6/82.] Repealed by 93-13-005 (Order 369), filed 6/3/93, effective 7/4/93. Statutory Authority: RCW 43.70.040.

WAC 246-293-001 Purpose. This chapter is promulgated pursuant to the authority granted in the Public Water System Coordination Act of 1977, chapter 70.116 RCW, for the purpose of implementing a program relating to public water system coordination within the state of Washington, for