

Chapter 246-246 WAC

RADIATION PROTECTION—RADIOLOGICAL CRITERIA FOR DECOMMISSIONING

WAC

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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 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 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 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, WSR 15-06-015, § 246-246-001, filed 2/23/15, effective 3/26/15; WSR 01-14-045, § 246-246-001, filed 6/29/01, effective 7/30/01; WSR 00-07-085, § 246-246-001, filed 3/15/00, effective 4/15/00.]

WAC 246-246-010 Definitions, abbreviations, and acronyms. The definitions, abbreviations, and acronyms in this section and WAC 246-220-010 apply throughout this chapter unless the context clearly indicates otherwise.

(1) "Critical group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(2/23/15)

(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, WSR 15-06-015, § 246-246-010, filed 2/23/15, effective 3/26/15; WSR 00-07-085, § 246-246-010, filed 3/15/00, effective 4/15/00.]

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 groundwater sources of drinking water; and

(2) The residual radioactivity has been reduced to levels that are 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, WSR 15-06-015, § 246-246-020, filed 2/23/15, effective 3/26/15; WSR 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

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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 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 license termination plan 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:

(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, WSR 15-06-015, § 246-246-030, filed 2/23/15, effective 3/26/15; WSR 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 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 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 the license termination plan 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;

(e) Has provided sufficient financial assurance in the form of a trust fund 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.

(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. WSR 15-06-015, § 246-246-040, filed 2/23/15, effective 3/26/15; WSR 00-07-085, § 246-246-040, filed 3/15/00, effective 4/15/00.]

WAC 246-246-050 Public notification and public participation. Upon receipt of a license termination plan 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. WSR 15-06-015, § 246-246-050, filed 2/23/15, effective 3/26/15; WSR 00-07-085, § 246-246-050, filed 3/15/00, effective 4/15/00.]

WAC 246-246-060 Minimization of contamination.

(1) 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.

(2) Licensees shall, to the extent practicable, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in chapter 246-221 WAC and radiological criteria for license termination in this chapter.

(3) Each licensee shall make or cause to be made, surveys of areas, including the subsurface, that:

(a) May be necessary for the licensee to comply with the regulations in this chapter; and

(b) Are reasonable under the circumstances to evaluate:

(i) The magnitude and extent of radiation levels;

(ii) Concentrations or quantities of residual radioactivity; and

(iii) The potential radiological hazards of the radiation levels and residual radioactivity detected.

(4) Notwithstanding subsection (3) of this section, records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning, and such records must be retained in accordance with WAC 246-235-075, as applicable.

(5) The licensee shall ensure that instruments and equipment used for quantitative radiation measurements (for example, dose rate and effluent monitoring) are calibrated periodically as required in WAC 246-221-110(2), 246-240-101, and 246-240-104.

[Statutory Authority: RCW 70.98.050. WSR 15-06-015, § 246-246-060, filed 2/23/15, effective 3/26/15; WSR 00-07-085, § 246-246-060, filed 3/15/00, effective 4/15/00.]