

**WSR 14-02-005**  
**PROPOSED RULES**  
**DEPARTMENT OF**  
**SOCIAL AND HEALTH SERVICES**  
(Aging and Long-Term Support Administration)  
[Filed December 19, 2013, 9:53 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-20-040.

Title of Rule and Other Identifying Information: Contracted residential care services, chapter 388-110 WAC.

Hearing Location(s): Office Building 2, Lookout Room, DSHS Headquarters, 1115 Washington, Olympia, WA 98504 (public parking at 11th and Jefferson. A map is available at <http://www1.dshs.wa.gov/msa/rpau/RPAU-OB-2directions.html>), on February 4, 2014, at 10:00 a.m.

Date of Intended Adoption: Not earlier than February 5, 2014.

Submit Written Comments to: DSHS Rules Coordinator, P.O. Box 45850, Olympia, WA 98504, e-mail DSHSRPAURulesCoordinator@dshs.wa.gov, fax (360) 664-6185, by 5 p.m. on February 4, 2014.

Assistance for Persons with Disabilities: Contact Jennisha Johnson, DSHS rules consultant, by January 15, 2014, TTY (360) 664-6178 or (360) 664-6094 or by e-mail jennisha.johnson@dshs.wa.gov.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The department is amending these rules to comply with and be consistent with 2012 legislature SHB 2056 to change the term "boarding home" to "assisted living facility."

Reasons Supporting Proposal: See above.

Statutory Authority for Adoption: Chapter 18.20 RCW.

Statute Being Implemented: Chapter 18.20 RCW.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of social and health services, governmental.

Name of Agency Personnel Responsible for Drafting: Jeanette K. Childress, P.O. Box 45600, Olympia, WA 98504-5600, (360) 725-2591; Implementation and Enforcement: Lori Melchiori, P.O. Box 45600, Olympia, WA 98504-5600, (360) 725-2404.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Under RCW 19.85.025 (3), a small business economic impact statement is not required for rules adopting or incorporating, by reference without material change, Washington state statutes or regulations.

A cost-benefit analysis is not required under RCW 34.05.328. Under RCW 34.05.328 (5)(b), a cost-benefit analysis is not required for rules adopting or incorporating, by reference without material change, Washington state statutes or regulations.

December 17, 2013  
Katherine I. Vasquez  
Rules Coordinator

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-010 Scope and applicability.** (1) These rules apply only to (~~boarding homes~~) assisted living facilities licensed under chapter 18.20 RCW, or (~~boarding homes~~) assisted living facilities located within the boundaries of a federally recognized Indian reservation and licensed by a tribe, that contract with the department to provide assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care.

(2) Only services provided to or on behalf of the assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care resident, and paid for fully or partially by the department shall be subject to these rules.

AMENDATORY SECTION (Amending WSR 06-05-022, filed 2/6/06, effective 3/9/06)

**WAC 388-110-020 Definitions. "Adult residential care"** is a package of services provided by (~~a boarding home~~) an assisted living facility that is licensed under chapter 18.20 RCW and that has a contract with the department under RCW 74.39A.020 to provide personal care services in accordance with Parts I and IV of this chapter.

**"Applicant"** means the individual, partnership, corporation or other entity which has applied for a contract with the department to provide assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care to state funded residents in a licensed (~~boarding home~~) assisted living facility.

**"Assisted living services"** is a package of services provided by (~~a boarding home~~) an assisted living facility that has a contract with the department under RCW 74.39A.010 to provide personal care services, intermittent nursing services, and medication administration services in accordance with Parts I and II of this chapter. Assisted living services include housing for the resident in a private apartment-like unit.

(~~"Boarding home" means the same as the definition found in RCW 18.20.020, or a boarding home located within the boundaries of a federally recognized Indian reservation and licensed by the tribe~~) "Assisted Living Facility" means any home or other institution, however named, which is advertised, announced, or maintained for the express or implied purpose of providing housing, basic services, and assuming general responsibility for the safety and well-being of the residents, and may also provide domiciliary care, consistent with this chapter to seven or more residents after July 1, 2000. However, an assisted living facility that is licensed for three to six residents prior to or on July 1, 2000, may maintain its assisted living facility license as long as it is continually licensed as an assisted living facility. "Assisted living facility" does not include facilities certified as group training homes pursuant to RCW 71A.22.040, nor any home, institution or section thereof which is otherwise licensed and regulated under the provisions of state law providing specifically for the licensing and regulation of such home, institu-

tion or section thereof. Nor shall it include any independent senior housing, independent living units in continuing care retirement communities, or other similar living situations including those subsidized by the Department of Housing and Urban Development. "Assisted living facility" may also include persons associated with the assisted living facility to carry out its duties under this chapter.

"Case manager" means the department staff person or designee assigned to negotiate, monitor, and facilitate a service plan for residents receiving services fully or partially paid for by the department.

"Contractor" means the individual, partnership, corporation, or other entity which is licensed by the department or tribe to operate the ~~((boarding home))~~ assisted living facility and contracts with the department to provide assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care to state funded residents in a licensed ~~((boarding home))~~ assisted living facility.

"Department" means the Washington state department of social and health services (DSHS).

"Dignity" means the quality or condition of being esteemed and respected in such a way as to validate the self-worth of the resident.

"Enhanced adult residential care" is a package of services provided by ~~((a boarding home))~~ an assisted living facility that is licensed under chapter 18.20 RCW and that has a contract with the department to provide personal care services, intermittent nursing services, and medication administration services in accordance with Parts I and III of this chapter.

"Enhanced adult residential care-specialized dementia care services" is a package of service, including specialized dementia care assessment and care planning, personal care services, intermittent nursing services, medication administration services, specialized environmental features and accommodations, and activity programming. Enhanced adult residential care-specialized dementia care services are delivered only within:

(1) Contracted ~~((boarding homes))~~ assisted living facilities that are dedicated solely to the care of individuals with dementia, including Alzheimer's disease, and that meet the requirements of parts I and III of this chapter; or

(2) Designated, separate units located within contracted ~~((boarding homes))~~ assisted living facilities that are dedicated solely to the care of individuals with dementia, including Alzheimer's disease, and that meet the requirements of parts I and III of this chapter.

"Homelike" means an environment having the qualities of a home, including privacy, comfortable surroundings, and the opportunity to decorate one's living area and arrange furnishings to suit one's individual preferences. A homelike environment provides residents with an opportunity for self-expression, and encourages interaction with the community, family and friends.

"Independence" means free from the control of others and being able to assert one's own will, personality and preferences.

"Individuality" means the quality of being unique; the aggregate of qualities and characteristics that distinguishes

one from others. Individuality is supported by modifying services to suit the needs or wishes of a specific individual.

"Medication administration" means the direct application of a prescribed medication, whether by injection, inhalation, ingestion, or any other means, to the body of a resident by a person legally authorized to do so.

"Personal care services" means the same as physical or verbal assistance with activities of daily living included under "personal care services" described in WAC 388-106-0010. Personal care services do not include assistance with instrumental activities of daily living described in WAC 388-106-0010, nor assistance with tasks that must be performed by a licensed health professional.

"Resident" means a person residing in ~~((a boarding home))~~ an assisted living facility for whom services are paid for, in whole or in part, by the department under a contract for assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care. "Resident" includes former residents when examining complaints about admissions, readmissions, transfers or discharges. For decision-making purposes, the term "resident" includes the resident's surrogate decision maker in accordance with state law or at the resident's request.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-030 Contract application.** (1) In order to apply for a contract with the department to provide assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care, an applicant must:

(a) Have a valid ~~((boarding home))~~ assisted living facility license issued by the department or tribe, or have applied for ~~((a boarding home))~~ an assisted living facility license for the ~~((boarding home))~~ assisted living facility at which the contracted services will be provided;

(b) Complete and submit a contract application on department provided forms at least ninety days before the requested effective date for the contract; and

(c) Provide information regarding any licensed care facilities with which any of the following have been affiliated within the last ten years:

(i) The applicant;

(ii) Any partner, or owner of five percent or more of the applicant; and

(iii) Any officer, director, or managerial employee of the applicant.

(2) The department must confirm that the applicant has a valid ~~((boarding home))~~ assisted living facility license issued by the department or tribe and meets the requirements of this chapter before issuing a contract.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-040 Contract qualifications.** (1) The department must consider separately and jointly as applicants each person and entity named in the application for a contract for assisted living services, enhanced adult residential care,

enhanced adult residential care-specialized dementia care services, or adult residential care. If the department finds any person or entity unqualified, the department must deny the contract.

(2) In making a determination whether to grant a contract, the department must review and consider:

(a) The information in the application;

(b) Other documents and information the department deems relevant, including inspection and complaint investigation findings for each licensed care facility, and each care facility that was required by law to be licensed but was not, with which any of the following have been affiliated within the last ten years:

(i) The applicant;

(ii) Any partner, or owner of five percent or more of the applicant; or

(iii) Any officer, director, or managerial employee of the applicant.

(c) The history and quality of services provided by the applicant; and

(d) Funding from the legislature available to the department to purchase residential care.

(3) The applicant and the ~~((boarding home))~~ assisted living facility for which a contract is sought must comply with all requirements established by chapter 74.39A RCW, chapter 388-78A WAC and this chapter.

(4) The department shall review the qualifications of applicants for enhanced adult residential care-specialized dementia care services contracts and may select a limited number with which to enter into contracts, based on:

(a) Which applicants are best qualified to provide specialized dementia care services, as determined by the department;

(b) The need for services in the area of the state in which the applicant is located; and

(c) Other qualifications specified in this section.

(5) The department must deny, suspend, revoke or refuse to renew a contract if an applicant or contractor or any partner, officer, director, managerial employee, or owner of five percent or more of the contractor or applicant has a history of significant noncompliance with federal or state regulations, rules or laws in providing care or services to frail elders, vulnerable adults or children. The department must consider evidence of noncompliance on a case-by-case basis.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-050 Change of contractor.** (1) A change of contractor must occur when there is a change in the ~~((boarding home))~~ assisted living facility licensee per WAC 388-78A-2770.

(2) When a change of licensee and contractor is contemplated, the current contractor must notify the department and all residents and residents' representatives at least ninety days prior to the proposed date of change. The notice must be in writing and must contain the following information:

(a) Name of the present contractor and prospective contractor;

(b) Name and address of the boarding home being changed; and

(c) Date of proposed change.

(3) The operation of an assisted living services, enhanced adult residential care, enhanced adult residential care-specialized dementia care services, or adult residential care contract must not be changed until the new operator has entered into a contract with the department. The new contractor must comply with contract application requirements in WAC 388-110-030.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-090 Administration.** The contractor must:

(1) Maintain substantial compliance with all requirements of chapters 18.20 RCW, ~~((Boarding homes))~~ Assisted living facilities, and 70.129 RCW, Long-term care resident rights, and chapters 388-78A WAC, ~~((Boarding home))~~ Assisted living facilities licensing rules, and 388-105 WAC medicaid rates for contracted home and community residential care services;

(2) Permit department representatives to enter the ~~((boarding home))~~ assisted living facility without prior notification and cooperate with department representatives as they monitor the contract requirements under this chapter and conduct complaint investigations, including but not limited to observing and privately interviewing residents, and accessing resident records.

AMENDATORY SECTION (Amending WSR 06-05-022, filed 2/6/06, effective 3/9/06)

**WAC 388-110-100 Discharge, social leave, and bed hold.** The contractor is not required to discharge (move out) and readmit a resident for absences of less than twenty-one consecutive days. The contractor must:

(1) Note an absence in a resident's record when a resident is absent from the ~~((boarding home))~~ assisted living facility for more than seventy-two consecutive hours;

(2) Obtain department approval for payment for social leave in excess of eighteen calendar days per year;

(3) Notify the department within one working day whenever the resident:

(a) Is hospitalized;

(b) Is discharged to another ~~((boarding home))~~ assisted living facility, nursing home or other health care facility;

(c) Dies; or

(d) Is missing from the ~~((boarding home))~~ assisted living facility and his or her whereabouts are unknown.

(4) Include the department's case manager in the development of a discharge (move out) plan, and have the case manager approve the plan before any required notice of discharge is issued to the resident, except in an emergency;

(5) Notify the medicaid resident of the ~~((boarding home's))~~ assisted living facility's policies regarding bed-holds, consistent with subsections (6) and (7) of this section and WAC 388-105-0045 as soon as possible before, or as soon as practicable following hospitalization or discharge to

a nursing home. The notification must include information concerning:

- (a) Options for bed-hold payments, and
- (b) Rights to return to the boarding home.
- (6) Retain a bed or unit for a medicaid resident who is hospitalized or temporarily placed in a nursing home for up to twenty days when the medicaid resident is likely to return to the ~~((boarding home))~~ assisted living facility and the department makes payment to the ~~((boarding home))~~ assisted living facility for holding the bed or unit consistent with WAC 388-105-0045. If, prior to the end of the twenty days, the department determines, or the contractor determines and the department concurs, that the medicaid resident will likely not return to the ~~((boarding home))~~ assisted living facility:

- (a) The department must terminate the bed-hold payment; and
- (b) The contractor may rent that bed or unit to another resident.

(7) Not seek third-party payment for the first twenty days of retaining the bed for a medicaid resident who is hospitalized or discharged to a nursing home and for whom the department is making a bed hold payment consistent with WAC 388-105-0045.

(a) The contractor may seek third-party payment consistent with RCW 18.20.290 and chapter 388-105 WAC to hold a bed or unit for the time following the first twenty days of a medicaid resident's absence for hospitalization or nursing home care.

(b) If third-party payment is not available, the medicaid resident may return to the first available and appropriate bed or unit if the medicaid resident:

- (i) Continues to meet the ~~((boarding home's))~~ assisted living facility's admission criteria; and
- (ii) Chooses to return to the ~~((boarding home))~~ assisted living facility.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-120 Resident personal funds.** (1) Upon the death of a resident, the contractor must promptly convey the resident's personal funds held by the ~~((boarding home))~~ assisted living facility with a final accounting of such funds to the department or to the individual or probate jurisdiction administering the resident's estate no later than forty-five calendar days after the date of the resident's death:

(a) When the personal funds of the deceased resident must be paid to the state of Washington, those funds and the final accounting shall be made payable to the secretary, department of social and health services, and sent to the Office of Financial Recovery, Estate Recovery Unit, P.O. Box 9501, Olympia, Washington 98507-9501, or such address as may be directed by the department in the future;

(b) The check and final accounting accompanying the payment must contain the name and Social Security number of the deceased individual from whose personal funds account the moneys are being paid; and

(c) The department of social and health services shall establish a release procedure for use of funds necessary for burial expenses.

(2) In situations where the resident is absent from the ~~((boarding home))~~ assisted living facility for an extended time without notifying the ~~((boarding home))~~ assisted living facility, and the resident's whereabouts is unknown:

(a) The contractor must make a reasonable effort to find the missing resident; and

(b) If the resident cannot be located after ninety days, the contractor must notify the department of revenue of the existence of "abandoned property," outlined in chapter 63.29 RCW. The contractor must deliver to the department of revenue the balance of the resident's personal funds within twenty days following such notification.

(3) Prior to the change of contractor of the ~~((boarding home))~~ assisted living facility business, the contractor must:

(a) Provide each resident with a written accounting of any personal funds held by the ~~((boarding home))~~ assisted living facility;

(b) Provide the new contractor with a written accounting of all resident funds being transferred; and

(c) Obtain a written receipt for those funds from the new operator.

AMENDATORY SECTION (Amending WSR 09-19-042, filed 9/10/09, effective 10/11/09)

**WAC 388-110-140 Assisted living services facility physical requirements.** (1) Licensed ~~((boarding homes))~~ assisted living facilities with an assisted living services contract are required to:

(a) Meet the physical requirements that were in effect at the time of initial contracting; or

(b) If there is a break in contract, meet the requirements in effect at the time of the new contract.

(2) The contractor must ensure each resident has a private apartment-like unit. Each unit must have at least the following:

(a) A minimum area of two hundred twenty square feet. The minimum area may include counters, closets and built-ins, but must exclude the bathroom;

(b) A private bathroom. The private bathroom must be equipped with a sink, a toilet, and a shower or bathtub. At least one wheelchair accessible bathroom with a roll-in shower that is at least forty-eight inches by thirty-six inches must be provided for every two residents whose care is partially or fully funded through the assisted living contract;

(c) A lockable entry door;

(d) A kitchen area. The kitchen area must be equipped with:

(i) A refrigerator;

(ii) A microwave oven, range or cooktop;

(iii) A counter mounted kitchen sink, with inside dimensions of at least twenty-one inches by fifteen inches, and a minimum depth of seven inches;

(iv) A storage space for utensils and supplies; and [a]

(v) A work counter surface, with a minimum usable surface area of thirty inches in length by twenty-four inches deep, a maximum height of thirty-four inches, and having a clear knee space beneath at least twenty-seven inches in height and thirty inches in length; and

(e) A living area wired for telephone and, where available in the geographic location, wired for television service.

(3) Married couples may share an apartment-like unit under an assisted living contract if:

(a) Both residents understand they are each entitled to live in a separate private unit; and

(b) Both residents mutually request to share a single apartment-like unit.

(4) The contractor must provide a private accessible mailbox for each resident whose care is partially or fully funded through the assisted living contract.

(5) The contractor must provide homelike smoke-free common areas with sufficient space for socialization designed to meet resident needs. Common areas must be available for resident use at any time provided such use does not disturb the health or safety of other residents. The contractor must make access to outdoor areas available to all residents.

(6) The contractor must provide a space for residents to meet with family and friends outside the resident's living unit.

(7) The department may grant an exemption to the requirements of this section in accordance with WAC 388-78A-2820.

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency and appear in the Register pursuant to the requirements of RCW 34.08.040.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-150 Assisted living service standards.** In ~~((a boarding home))~~ an assisted living facility with an assisted living contract, the contractor must meet the requirements of parts I and II of this chapter, and for residents served under the assisted living contract:

(1) Ensure that both the physical environment and the delivery of assisted living services are designed to enhance autonomy in ways which reflect personal and social values of dignity, privacy, independence, individuality, choice and decision making of residents. The contractor must provide resident services in a homelike environment for residents who may have a range of needs and preferences.

(2) Must provide or arrange for, at no additional cost to the resident and consistent with chapter 388-78A WAC:

(a) Intermittent nursing services;

(b) Medication administration;

(c) Personal care services; and

(d) Supportive services that promote independence and self-sufficiency.

(3) Make available and offer at no additional cost to the resident generic personal care items needed by the resident such as soap, shampoo, toilet paper, toothbrush, toothpaste, deodorant, sanitary napkins, and disposable razors. This does not include items covered by medical coupons or preclude residents from choosing to purchase their own personal care items.

(4) Provide all residents with access to an on-site washing machine and dryer for resident use.

(5) Make beverages and snacks available to residents.

AMENDATORY SECTION (Amending WSR 06-05-022, filed 2/6/06, effective 3/9/06)

**WAC 388-110-220 Enhanced adult residential care service standards.** (1) In ~~((a boarding home))~~ assisted living facility with an enhanced adult residential care contract, the contractor must meet the requirements of parts I and III of this chapter, and for residents served under the enhanced adult residential care contract:

(a) Develop for each resident a negotiated service agreement that supports the principles of dignity, privacy, choice in decision making, individuality, and independence.

(b) Provide or arrange for, at no additional cost to the resident and consistent with the resident's negotiated service agreement and chapter 388-78A WAC:

(i) Intermittent nursing services;

(ii) Medication administration;

(iii) Personal care services; and

(iv) Supportive services that promote independence and self-sufficiency; and

(c) Not allow more than two residents per room.

(2) An enhanced adult residential care-specialized dementia care services contract is a distinct contract, separate from an enhanced adult residential care contract. In ~~((a boarding home))~~ an assisted living facility with an enhanced adult residential care-specialized dementia care services contract, the contractor must:

(a) Meet the requirements of parts I and III of this chapter,

(b) Meet the requirements of subsection (1) of this section, and

(c) Maintain an enhanced adult residential care services contract or an assisted living services contract in addition to the enhanced adult residential care-specialized dementia care services contract.

(3) In ~~((a boarding home))~~ an assisted living facility with an enhanced adult residential care-specialized dementia care services contract, for residents served under that contract, the contractor must:

(a) Complete a full assessment of residents as specified in chapter 388-78A WAC, at a minimum, on a semi-annual basis;

(b) Maintain awake staff twenty-four hours per day. The contractor must provide staffing that is adequate to respond to the assessed sleeping and waking patterns and needs of residents;

(c) Develop and implement policies and procedures:

(i) To manage residents who may wander;

(ii) To outline actions to be taken in case a resident elopes; and

(iii) To obtain consultative resources to address behavioral issues for residents. The contractor must include a plan that identifies the professional (i.e., clinical psychologist, psychiatrist, psychiatric nurse practitioner, or other behavioral specialist familiar with care of persons with dementia with complex or severe problems) who will provide the consultation, and when and how the consultation will be utilized.

(d) Ensure that each staff who works directly with residents has at least six hours of continuing education per year related to dementia, including Alzheimer's disease. This six hours of continuing education may be part of the ten hours of

continuing education required by WAC 388-112-0205. Appropriate topics include, but are not limited to:

- (i) Agitation: Caregiving strategies;
- (ii) Challenging behaviors: Strategies for managing aggression and sexual behavior;
- (iii) Delusions and hallucinations;
- (iv) Using problem-solving strategies in dementia care;
- (v) Depression and dementia;
- (vi) Fall prevention for people with dementia;
- (vii) Personal care as meaningful activity;
- (viii) Promoting adequate food and fluid consumption;
- (ix) Promoting pleasant and purposeful activity;
- (x) Resistance to care: Caregiving strategies; and
- (xi) Recognizing and assessing pain in people with dementia.

(e) Provide all necessary physical assistance with bathing and toilet use for residents who require caregivers to perform these activities and subtasks of these activities, and required oversight and supervision, encouragement and cueing. For the purposes of this subsection:

- (i) "Bathing" has the same meaning as described in WAC 388-106-0010; and
- (ii) "Toilet use" has the same meaning as described in WAC 388-106-0010.

(f) Routinely provide assistance with eating as necessary, including required oversight and supervision, encouragement and cueing. The contractor must also provide all necessary physical assistance with eating on an occasional basis for residents who require total feeding assistance. However, the contractor is not required to provide total feeding assistance for an extended or indefinite period. As used in this section, eating has the same meaning as described in WAC 388-106-0010, except that the contractor is not required to provide tube feedings or intravenous nutrition.

(g) Provide daily activities consistent with the functional abilities, interests, habits and preferences of the individual residents. The contractor must support the participation of residents and the resident council, if there is one, in the development of recreational and activity programs that reflect the needs and choices of residents. On a daily basis, the contractor must provide residents access to:

- (i) Opportunities for independent, self-directed, activities.
- (ii) Individual activities, in which a staff person or volunteer engages the resident in a planned and/or spontaneous activity of interest. Activities may include personal care activities that provide opportunities for purposeful and positive interactions; and
- (iii) Group activities.
- (h) Offer opportunities for activities that accommodate variations in a resident's mood, energy and preferences. The contractor must make appropriate activities available based upon the resident's individual schedule and interests. For example, individuals up at night must have access to staff support, food and appropriate activities;

(i) Make available multiple common areas, at least one of which is outdoors, that vary by size and arrangement such as: various size furniture groupings that encourage social interaction; areas with environmental cues that may stimulate activity, such as a resident kitchen or workshop; areas with

activity supplies and props to stimulate conversation; a garden area; and paths and walkways that encourage exploration and walking. These areas must accommodate and offer opportunities for individual or group activity;

- (j) Ensure that the outdoor area for residents:
  - (i) Is accessible to residents without staff assistance;
  - (ii) Is surrounded by walls or fences at least seventy-two inches high;
  - (iii) Has areas protected from direct sunshine and rain throughout the day;
  - (iv) Has walking surfaces that are firm, stable, slip-resistant and free from abrupt changes, and are suitable for individuals using wheelchairs and walkers;
  - (v) Has suitable outdoor furniture;
  - (vi) Has plants that are not poisonous or toxic to humans; and
  - (vii) Has areas for appropriate outdoor activities of interest to residents, such as walking paths, raised garden or flower beds, bird feeders, etc.

(k) Ensure that areas used by residents have a residential atmosphere, and residents have opportunities for privacy, socialization, and wandering behaviors;

(l) Ensure any public address system in the area of specialized dementia care services is used only for emergencies;

(m) Encourage residents' individualized spaces to be furnished and or decorated with personal items based on resident needs and preferences;

(n) Ensure residents have access to their own rooms at all times without staff assistance; and

(o) Make available and offer at no additional cost to the resident generic personal care items needed by the resident such as soap, shampoo, toilet paper, toothbrush, toothpaste, deodorant, sanitary napkins, and disposable razors. This does not include items covered by medical coupons or preclude residents from choosing to purchase their own personal care items.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-240 Adult residential care service standards.** In ~~((a boarding home))~~ an assisted living facility with an adult residential care contract, the contractor must meet the requirements of parts I and IV of this chapter, and for residents served under the adult residential care contract:

(1) Develop for each resident a negotiated service agreement that supports the principles of dignity, privacy, choice in decision making, individuality, and independence; and

(2) Provide personal care services based on the resident's negotiated service agreement.

AMENDATORY SECTION (Amending WSR 04-16-063, filed 7/30/04, effective 9/1/04)

**WAC 388-110-260 Remedies.** (1) The department may take one or more of the actions listed in subsection (3)(a) of this section in any case in which the department finds that a contractor of assisted living services, enhanced adult residential care services, enhanced residential care-specialized dementia care services, or adult residential care services has:

(a) Failed or refused to comply with the applicable requirements of chapter 74.39A RCW, of chapter 70.129 RCW, chapter 388-78A WAC or of this chapter;

(b) Operated without a license or under a revoked license;

(c) Knowingly, or with reason to know, made a false statement of material fact on his or her application for a contract or any data attached thereto, or in any matter under investigation by the department; or

(d) Willfully prevented or interfered with any inspection or investigation by the department.

(2)(a) For failure or refusal to comply with any applicable requirements of chapter 74.39A RCW, of chapter 70.129 RCW, chapter 388-78A WAC or of this chapter, the department may provide consultation before imposing remedies under subsection (3)(a) unless the violations pose a serious risk to residents, are recurring or have been uncorrected.

(b) When violations of this chapter pose a serious risk to a resident, are recurring or have been uncorrected, the department must impose a remedy or remedies listed under subsection (3)(a). In determining which remedy or remedies to impose, the department must take into account the severity of the impact of the violations on residents and which remedy or remedies are likely to improve resident outcomes and satisfaction in a timely manner.

(3)(a) Actions and remedies the department is authorized to impose include:

(i) Refusal to enter into a contract;

(ii) Imposition of reasonable conditions on a contract, such as correction within a specified time, training, and limits on the type of clients the provider may admit or serve;

(iii) Imposition of civil penalties of not more than one hundred dollars per day per violation;

(iv) Suspension, termination, or refusal to renew a contract; or

(v) Order stop placement of persons under the contract.

(b) When the department orders stop placement, the ~~((boarding home))~~ assisted living facility must not admit any person under the contract until the stop placement order is terminated. The department may approve readmission of a resident to the ~~((boarding home))~~ assisted living facility from a hospital or nursing home during the stop placement. The department must terminate the stop placement when the department determines that:

(i) The violations necessitating the stop placement have been corrected; and

(ii) The provider exhibits the capacity to maintain adequate care and service.

(c) Conditions the department may impose on a contract include, but are not limited to the following:

(i) Correction within a specified time;

(ii) Training related to the violations; and

(iii) Discharge of any resident when the department determines discharge is needed to meet that resident's needs or for the protection of other residents.

(d) When a contractor fails to pay a fine when due under this chapter, the department may, in addition to other remedies, withhold an amount equal to the fine plus interest, if any, from the contract payment.

## WSR 14-02-006

### PROPOSED RULES

### DEPARTMENT OF

### SOCIAL AND HEALTH SERVICES

(Aging and Long-Term Support Administration)

[Filed December 19, 2013, 9:57 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-21-127 and 11-23-152.

Title of Rule and Other Identifying Information: Adding new sections to chapter 388-106 WAC, Long-term care services.

Hearing Location(s): Office Building 2, Lookout Room, DSHS Headquarters, 1115 Washington, Olympia, WA 98504 (public parking at 11th and Jefferson. A map is available at <http://www1.dshs.wa.gov/msa/rpau/RPAU-OB-2directions.html>), on February 4, 2014, at 10:00 a.m.

Date of Intended Adoption: Not earlier than February 5, 2014.

Submit Written Comments to: DSHS Rules Coordinator, P.O. Box 45850, Olympia, WA 98504, e-mail DSHSRPAURulesCoordinator@dshs.wa.gov, fax (360) 664-6185, by 5 p.m., February 4, 2014.

Assistance for Persons with Disabilities: Contact Jennisha Johnson, DSHS rules consultant, by January 22, 2014, TTY (360) 664-6178 or (360) 664-6094 or by e-mail jennisha.johnson@dshs.wa.gov.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The department is adding new sections in chapter 388-106 WAC to establish a methodology for how DSHS calculates nursing home comparable home and community based long-term care availability to be used in the nursing home certificate of need process in Washington state. DSHS is creating this new section for clarification about how it calculates comparable nursing home capacity.

Reasons Supporting Proposal: See Purpose above.

Statutory Authority for Adoption: RCW 74.08.090, 74.09.520.

Statute Being Implemented: RCW 74.08.090, 74.09.520.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of social and health services, governmental.

Name of Agency Personnel Responsible for Drafting, Implementation and Enforcement: Debbie Blackner, P.O. Box 45600, Olympia, WA 98504-5600, (360) 725-2557.

No small business economic impact statement has been prepared under chapter 19.85 RCW. The preparation of a small business economic impact statement is not required, as no new costs will be imposed on small businesses or nonprofits as a result of this rule amendment.

A cost-benefit analysis is not required under RCW 34.05.328. Rules are exempt per RCW 34.05.328 (5)(b)(v), rules the content of which is explicitly and specifically dictated by statute.

December 16, 2014  
Katherine Y. Vasquez  
Rules Coordinator

### Nursing Facility Certificate of Need

#### NEW SECTION

**WAC 388-106-1600 What definitions apply to the nursing facility certificate of Need? "Activities of daily living"**, as defined in WAC 388-106-0010, includes tasks such as walking, eating, taking medications, maintaining personal hygiene, moving in bed and toileting.

**"Care assessment"** is an assessment tool used to determine eligibility for services and level of service need, and identify strengths, preferences and potential referrals to develop an individualized care plan.

**"Certificate of need program"** is a regulatory process under Chapter 70.38 RCW that requires certain healthcare providers, including nursing homes, to receive approval from the Department of Health before building certain types of facilities or offering new or expanded services.

**"Community residential"** refers to licensed community settings such as assisted living facilities and adult family homes where long-term care services are provided to residents.

**"Department"** means the Department of Social and Health Services.

**"Department of Health"** is the state agency that operates the certificate of need review program and determines the need for specific facilities and services, including nursing homes, in a manner that is consistent with the statewide health resources strategy developed under RCW 43.370.030 and 70.38.

**"In-home personal care"** is care provided by an agency or individual provider to clients living in their own home.

**"Minimum Data Set" or "MDS"** is a tool that is used to perform the comprehensive assessment of each resident's functional capabilities, which is required for all residents in medicare or medicaid certified nursing homes.

**"RUG III Score"** is the classification of each nursing facility resident into a specific group based on the individual's medical condition and level of care required.

#### NEW SECTION

**WAC 388-106-1610 What is the purpose of determining nursing facility comparable home and community based long-term capacity?** The Department of Health's certificate of need program is required to determine the need for nursing homes under WAC 246-310-210 (6)(b)(ii). The determination of need is based in part upon the availability of home and community-based long-term services in the planning area of the proposed nursing facility. When evaluating the need for additional nursing home beds, the data considered by the Department of Health must include data provided by the Department.

#### NEW SECTION

**WAC 000-106-1620 What methodology does the Department use to determine statewide or county specific nursing home comparable home and community-based long-term services availability?** The Department uses the following methodology to determine the statewide or county

specific nursing home comparable home and community-based long-term services availability.

(1) The department selects a recent, one-year time period from which to use MDS assessment data.

(2) The "typical RUG-III ADL score" is determined as follows. From the MDS data, two activity of daily living (ADL) RUG-III score values are calculated: (1) the mean RUG-III ADL score, rounded to the nearest whole number, and (2) the modal RUG-III ADL score that occurs most commonly in the nursing home population in the selected time period. The "typical RUG-III ADL score" is the lower of the mean and modal values.

(3) Using the most recent month that both payment and assessment data are considered to be complete, persons receiving medicaid paid in-home personal care or community residential services are identified, and the MDS-equivalent ADL score from each home and community-based client's current CARE assessment is constructed.

(4) Using data from the month selected in subsection (3), count the number of in-home personal care clients being served by either the Aging and Long-Term Support or Developmental Disabilities Administrations who have an MDS-equivalent score at or above the typical RUG-III ADL nursing home score that was calculated in subsection (2).

(5) Using data from the month selected in subsection (3), calculate the proportion of medicaid-paid community residential clients with an MDS-equivalent score that is at or above the typical RUG-III ADL nursing home score calculated in subsection(2).

(i) When determining county level measures of nursing home comparable home and community based capacity, the statewide average for Medicaid-paid community residential clients is used.

(6) Calculate the overall statewide licensed capacity of community residential facilities.

(7) The proportion calculated in subsection (5) and the community residential capacity determined in subsection (6) are multiplied to estimate the community residential capacity that is nursing home comparable.

(8) Add the numbers calculated in subsections (4) and (7) to determine the total countable nursing-home-comparable home and community-based long-term capacity to be used in reporting to the Department of Health the availability of other services in the community as required in RCW 70.38.115.

**Reviser's note:** The section above was filed by the agency as WAC 000-106-1620. However, the other rules for the department of social and health services are found in Title 388 WAC. The section above appears to be WAC 388-106-1620, but pursuant to the requirements of RCW 34.08.040, it is published in the same form as filed by the agency.

#### WSR 14-02-007

#### PROPOSED RULES

#### EMPLOYMENT SECURITY DEPARTMENT

[Filed December 19, 2013, 10:09 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-08-044.



Title of Rule and Other Identifying Information: WAC 192-120-010 Claimant information booklet and 192-270-035, related to timeframes for applying for training benefits.

Hearing Location(s): Employment Security Department, Maple Leaf Conference Room, 212 Maple Park Avenue S.E., Olympia, WA, on February 13, 2014, at 11:00 a.m.

Date of Intended Adoption: February 14, 2014.

Submit Written Comments to: Pamela Ames, P.O. Box 9046, Olympia, WA 98507-9046, e-mail pames@esd.wa.gov, fax (360) 902-0911, by February 12, 2014.

Assistance for Persons with Disabilities: Contact Kintu Nnambi by February 12, 2014, TTY (800) 833-6384 or (360) 725-9454.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The rules eliminate the requirement that a hard copy of the claimant information handbook will be mailed to every individual who files a claim. Instead, the web address for accessing the claimant will be provided at the time the claim is filed and in a notice sent via e-mail or by postal service for those without an e-mail or who have not given the department permission to contact them by e-mail. Hard copies will be provided without charge to any claimant who requests one. The rules also clarify that the timeframes for applying for training benefits will begin with the date the notice is provided rather than the date a handbook is mailed.

Reasons Supporting Proposal: The change will result in significant cost savings to the department, which will be spent on staff providing direct services to the public.

Statutory Authority for Adoption: RCW 50.12.010 and 50.12.040.

Statute Being Implemented: Chapter 50.20 RCW, RCW 50.22.155.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Employment security department, governmental.

Name of Agency Personnel Responsible for Drafting and Implementation: Juanita Myers, 212 Maple Park, Olympia, (360) 902-9665; and Enforcement: Neil Gorrell, 212 Maple Park, Olympia, (360) 902-9303.

No small business economic impact statement has been prepared under chapter 19.85 RCW. There is no disproportionate impact on small business.

A cost-benefit analysis is not required under RCW 34.05.328. The rules are intended to reduce costs while ensuring claimants still receive the information needed regarding their rights and responsibilities. They do not meet the definition of significant legislative rules under RCW 34.05.328.

December 19, 2013  
Nan Thomas  
Deputy Commissioner

AMENDATORY SECTION (Amending WSR 99-08-073, filed 4/5/99, effective 5/6/99)

**WAC 192-120-010 Claimant information booklet.**

(1) The department will publish and post on its web site an information ~~((for claimants))~~ booklet ~~((form number EMS~~

~~8139, to))~~ for unemployment insurance claimants that provides basic information on the laws, rules, and procedures ~~((about claims))~~ for unemployment insurance benefit ~~((s))~~ claims. Single copies of the booklet will be available to the public at no charge.

(2) ~~((Each person))~~ The department will send claimants who file ~~((s))~~ an application for benefits ~~((will be mailed a copy of the most recent version of the information for claimants booklet.~~

(3) Each person who is mailed a copy of the information booklet will be responsible for filing claims in accordance with its instructions.

(4) A replacement booklet will be mailed to any person who requests one.

(5) Each person who is mailed a booklet is responsible for reporting and filing claims according to the information ~~((a link to the booklet by e-mail or other electronic means. If the department does not have the ability or authorization to notify a claimant by e-mail or other electronic means, the department will mail the claimant a written notice containing the web address for the booklet. The department will mail a hard copy of the booklet to any claimant who requests it.~~

(3) The department will maintain a brief descriptive web address to help claimants locate the booklet online. The link to the booklet will be prominently displayed on the department's web site.

(4) Each claimant is responsible for filing weekly claims and following all instructions as required in the booklet for the duration of the claim unless other specific information is given to the ~~((person))~~ claimant in writing.

~~((6))~~ (5) The department will assist any person who ~~((may have))~~ advises the department that he or she is having difficulty understanding the booklet.

~~((7))~~ (6) If ~~((you fail to))~~ a claimant does not ask for help in understanding the booklet, ~~((you))~~ he or she will be presumed to understand its contents and held responsible for any failure to act as directed by the booklet.

AMENDATORY SECTION (Amending WSR 12-09-025, filed 4/6/12, effective 7/1/12)

**WAC 192-270-035 Time frames.** (1) Information about training benefits will be included in the ~~((claimant information booklet))~~ informational pamphlet mailed or e-mailed to you at the time you file your application for unemployment benefits (see WAC 192-120-010). For purposes of subsections (2) and (3) of this section, the ~~((claimant information booklet))~~ informational pamphlet is considered your notification of the eligibility requirements for the training benefits program.

(2) Submitting a training plan.

Except for dislocated workers eligible under RCW 50.22.155 (2)(a)(i), you have ninety calendar days to submit a training plan to the department for approval, beginning on the date you are notified by the department about the eligibility requirements for training benefits. For new claims, the deadline will be ninety-five calendar days from the date your application for benefits is filed, which represents ninety days plus five days for the ~~((booklet to reach you))~~ pamphlet to be delivered by mail.

## (3) Enrollment in training.

Except for dislocated workers eligible under RCW 50.22.155 (2)(a)(i), you must be enrolled in training within one hundred twenty calendar days, beginning on the date you are notified about the eligibility requirements for training benefits. For new claims, the deadline will be one hundred twenty-five calendar days from the date your application for benefits is filed, which represents one hundred twenty days plus five days for the ~~((booklet to reach you))~~ pamphlet to be delivered by mail.

(4) If you are a dislocated worker eligible under RCW 50.22.155 (2)(a)(i), you must submit a training plan and enroll in training prior to the end of your benefit year.

(5) Except for dislocated workers eligible under RCW 50.22.155 (2)(a)(i), these time frames may be waived for good cause. For purposes of this section, "good cause" includes but is not limited to situations where:

(a) You were employer attached, including being on standby or partially unemployed, when you filed your claim for unemployment benefits but your attachment to your employer subsequently ended;

(b) You acted or failed to act on authoritative advice directly from department or partner staff upon which a reasonable person would normally rely;

(c) You were incapacitated due to illness or injury or other factors of similar gravity; or

(d) Other factors which would effectively prevent a reasonably prudent person, as defined in WAC 192-100-010, facing similar circumstances, from meeting the time frames established under this section.

(6) If you return to work, and subsequently become unemployed, the time frames described in subsections (2) and (3) begin with the date you file your additional claim for benefits.

**WSR 14-02-028****PROPOSED RULES****DEPARTMENT OF HEALTH**

[Filed December 20, 2013, 3:18 p.m.]

## Original Notice.

Proposal is exempt under RCW 34.05.310(4) or 34.05.-330(1).

Title of Rule and Other Identifying Information: WAC 246-980-065 Home care aide provisional certification, establishing a new process for the department of health to issue a provisional home care aide certification to a long-term care worker who is limited English proficient.

Hearing Location(s): Department of Health, Point Plaza East, Rooms 152/153, 310 Israel Road S.E., Tumwater, WA 98501, on February 10, 2014, at 1:30 p.m.

Date of Intended Adoption: February 24, 2014.

Submit Written Comments to: Kendra Pitzler, P.O. Box 47852, Olympia, WA 98504-7852, e-mail <http://www3.doh.wa.gov/policyreview/>, fax (360) 236-2901, by February 10, 2014.

Assistance for Persons with Disabilities: Contact Kendra Pitzler by February 3, 2014, TTY (800) 833-6388 or 711.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The proposal implements chapter 259, Laws of 2013 (SHB 1629) by creating a process for a provisional home care aide certification that can be issued to a long-term care worker who is limited English proficient to allow the person additional time to comply with the certification requirements in chapter 18.88B RCW.

Reasons Supporting Proposal: The intent of SHB 1629 was to allow applicants for home care aide certification who have limited English proficiency additional time to meet the requirements for certification. Under SHB 1629, long-term care workers have two hundred days from their date of hire to complete these requirements. The bill gives workers who are limited English proficient more time to meet these requirements. Vulnerable persons are at risk of losing access to personal care services if their caregivers are unable to meet the certification requirements within the specified timeframe.

Statutory Authority for Adoption: Chapter 259, Laws of 2013 (SHB 1629), RCW 18.88B.035.

Statute Being Implemented: Chapter 259, Laws of 2013 (SHB 1629), RCW 18.88B.035.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of health, governmental.

Name of Agency Personnel Responsible for Drafting, Implementation and Enforcement: Kendra Pitzler, 111 Israel Road S.E., Tumwater, WA 98501, (360) 236-4723.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Under RCW 19.85.025 and 34.05.310 (4)(c), a small business economic impact statement is not required for proposed rules that adopt or incorporate by reference, without material change, federal statutes or regulations, Washington state law, the rules of other Washington state agencies, or national consensus codes that generally establish industry standards.

A cost-benefit analysis is not required under RCW 34.05.328. The agency did not complete a cost-benefit analysis under RCW 34.05.328. RCW 34.05.328 (5)(b)(iii) exempts rules that adopt or incorporate by reference, without material change, federal statutes or regulations, Washington state law, the rules of other Washington state agencies, or national consensus codes that generally establish industry standards.

December 19, 2013

Jessica Todorovich

Deputy Secretary

for John Wiesman, DrPH, MPH

Secretary

## REQUIREMENTS FOR A PROVISIONAL CERTIFICATION

### NEW SECTION

**WAC 246-980-065 Home care aide provisional certification.** (1) The department may issue a provisional certification to a long-term care worker who is limited-English proficient and submits:

- (a) A request for a provisional certification; and
- (b) Verification of his or her date of hire as a long-term care worker, as follows:
  - (i) For individual providers, verification of the applicant's date of hire submitted directly by the department of social and health services; or
  - (ii) For all other applicants, a form supplied by the department and completed by the employer who hired the applicant as a long-term care worker, verifying the applicant's date of hire.
- (2) A provisional certification will be issued only once.
- (3) A provisional certification will take effect two hundred days from the applicant's date of hire as a long-term care worker, as defined in WAC 246-980-010(2).
- (4) A provisional certification will expire two hundred sixty days from the applicant's date of hire as a long-term care worker. The applicant must stop working on the two hundred sixtieth day of employment if the certification has not been granted for any reason.
- (5) A request for provisional certification may be denied pursuant to chapter 18.130 RCW, the Uniform Disciplinary Act, or based on RCW 18.88B.080.
- (6) For the purposes of this section, "limited-English proficient" means that an individual is limited in his or her ability to read, write, or speak English.
- (7) Provisional certifications will not be issued after March 1, 2016.

**WSR 14-02-029**  
**PROPOSED RULES**  
**DEPARTMENT OF HEALTH**  
 [Filed December 20, 2013, 3:23 p.m.]

Original Notice.

Proposal is exempt under RCW 34.05.310(4) or 34.05.-330(1).

Title of Rule and Other Identifying Information: WAC 246-810-990 Counselors fees and renewal cycle, increasing fees for agency affiliated counselor, certified counselor, and certified advisor credentials.

Hearing Location(s): Department of Health, Point Plaza East, Room 152/153, 310 Israel Road S.E., Tumwater, WA 98501, on February 4, 2014, at 9:00 a.m.

Date of Intended Adoption: February 11, 2014.

Submit Written Comments to: Sherry Thomas, Department of Health, P.O. Box 47850, Olympia, WA 98504-7850, e-mail <http://www3.doh.wa.gov/policyreview/>, fax (360) 236-4626, by February 4, 2014.

Assistance for Persons with Disabilities: Contact Sherry Thomas by January 21, 2014, TTY (800) 833-6388 or 711.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The proposed rule increases application, renewal and expired reissuance fees for three counselor credentials: Agency affiliated counselor, certified counselor, and certified advisor. These fee increases are needed to fully fund core credentialing, discipline, and regulatory activities.

Reasons Supporting Proposal: RCW 43.70.250 requires the department to charge sufficient fees to cover the costs of

administering each profession. The proposed fees meet this requirement by increasing revenue to cover costs. These professions started fiscal year 2011 with a deficit, partly because the number of applicants was fewer than anticipated. Mounting discipline costs have added to the problem of insufficient revenue. The proposed fees have been determined through fee analyses to support the costs of doing business. The operating budget, 3ESSB 5034 (2013 2nd sp. sess.) authorized these fee increases.

Statutory Authority for Adoption: RCW 43.70.250, 18.19.050, 43.70.110, 3ESSB 5034 (2013).

Statute Being Implemented: RCW 43.70.250, 18.19.050, 43.70.110, 3ESSB 5034 (2013).

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of health, governmental.

Name of Agency Personnel Responsible for Drafting, Implementation and Enforcement: Betty Moe, 111 Israel Road S.E., Tumwater, WA 98504, (360) 236-4912.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Under RCW 19.85.025 and 34.05.310 (4)(f), a small business economic impact statement is not required for proposed rules that set or adjust fees or rates pursuant to legislative standards.

A cost-benefit analysis is not required under RCW 34.05.328. The agency did not complete a cost-benefit analysis under RCW 34.05.238 [34.05.328]. RCW 34.05.328 (5)(b)(vi) exempts rules that set or adjust fees or rates pursuant to legislative standards.

December 20, 2013  
 Jessica Todorovich  
 Deputy Secretary  
 for John Wiesman, DrPH, MPH  
 Secretary

**AMENDATORY SECTION** (Amending WSR 11-20-092, filed 10/4/11, effective 12/1/11)

**WAC 246-810-990 Counselors fees and renewal cycle.** (1) Under chapter 246-12 WAC, Part 2, a counselor must renew his or her credential every year on the practitioner's birthday.

(2) Any separate examination fees are the responsibility of the applicant.

Title	Fee
(3) The following nonrefundable fees will be charged for registered hypnotherapist:	
Application and registration	155.00
Renewal	80.00
Late renewal penalty	75.00
Expired registration reissuance	75.00
Duplicate registration	30.00
Certification of registration	30.00

Title	Fee
(4) The following nonrefundable fees will be charged for certified counselor:	
Application and certification	<del>((110.00))</del> <u>160.00</u>
Examination or reexamination	85.00
Renewal	<del>((90.00))</del> <u>140.00</u>
Late renewal penalty	50.00
Expired credential reissuance	<del>((50.00))</del> <u>100.00</u>
Duplicate credential	15.00
Certification of credential	15.00
(5) The following nonrefundable fees will be charged for certified adviser:	
Application and certification	<del>((80.00))</del> <u>130.00</u>
Examination or reexamination	85.00
Renewal	<del>((65.00))</del> <u>115.00</u>
Late renewal penalty	50.00
Expired credential reissuance	<del>((50.00))</del> <u>100.00</u>
Duplicate credential	15.00
Certification of credential	15.00
(6) The following nonrefundable fees will be charged for registered agency affiliated counselor:	
Application and registration	<del>((50.00))</del> <u>60.00</u>
Renewal	<del>((40.00))</del> <u>50.00</u>
Late renewal penalty	40.00
Expired registration reissuance	<del>((40.00))</del> <u>50.00</u>
Duplicate registration	15.00
Certification of registration	15.00

Preproposal statement of inquiry was filed as WSR 13-15-124.

Title of Rule and Other Identifying Information: The department is amending the following sections in chapter 388-97 WAC, Nursing homes: WAC 388-97-0001 Definitions, 388-97-0300 Notice of rights and services, 388-97-0460 Grievance rights, 388-97-0520 Access and visitation rights, 388-97-1640 Required notification and reporting, 388-97-1840 Retaliation or discrimination prohibited, 388-97-4480 Criteria for imposing optional remedies, and other related rules as appropriate.

Hearing Location(s): Office Building 2, Lookout Room, DSHS Headquarters, 1115 Washington, Olympia, WA 98504 (public parking at 11th and Jefferson. A map is available at <http://www1.dshs.wa.gov/msa/rpau/RPAU-OB-2directions.html> or by calling (360) 664-6094), on February 4, 2014, at 10:00 a.m. The department is filing a continuance for the proposal filed as WSR 13-23-098 regarding proposed amendments to chapter 388-97 WAC, Nursing homes. A hearing is currently scheduled for January 7, 2014. The continuance will allow for a second hearing to occur, given the number of stakeholders and interested parties, coupled with the challenges of scheduling during the holiday season, to provide enough opportunity for public comment.

Date of Intended Adoption: Not earlier than February 4, 2014.

Submit Written Comments to: DSHS Rules Coordinator, P.O. Box 45850, Olympia, WA 98504-5850, 1115 Washington Street S.E., Olympia, WA 98504, e-mail DSHSRPAURulesCoordinator@dshs.wa.gov, fax (360) 664-6185, by 5 p.m. on February 4, 2014.

Assistance for Persons with Disabilities: Contact Jennisha Johnson, DSHS rules consultant, by January 22, 2014, TTY (360) 664-6178 or (360) 664-6094, or by e-mail at johnsj14@dshs.wa.gov.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The department is amending these rules to comply with, and be consistent with, two newly-passed state laws – SB [SSB] 5077 Gender-neutral terms and SB 5510 Vulnerable adults—Abuse.

Reasons Supporting Proposal: See above.

Statutory Authority for Adoption: Chapters 18.51 and 74.42 RCW.

Statute Being Implemented: Chapters 18.51 and 74.42 RCW.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of social and health services, governmental.

Name of Agency Personnel Responsible for Drafting: Sandy Robertson, P.O. Box 45600, Olympia, WA 98513, (360) 725-3204; Implementation: Irene Owens, P.O. Box 45600, Olympia, WA 98513, (360) 725-2489; and Enforcement: Lori Melchiori, P.O. Box 45600, Olympia, WA 98513, (360) 725-2404.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Under RCW 19.85-025(3), a small business economic impact statement is not required for rules adopting or incorporating, by reference

**WSR 14-02-030**

**PROPOSED RULES**

**DEPARTMENT OF**

**SOCIAL AND HEALTH SERVICES**

(Aging and Long-Term Support Administration)

[Filed December 20, 2013, 3:26 p.m.]

Continuance of WSR 13-23-098.

without material change, Washington state statutes or federal statutes or regulations.

A cost-benefit analysis is not required under RCW 34.05.328. Under RCW 34.05.328 (5)(b), a cost-benefit analysis is not required for rules adopting or incorporating, by reference without material change, Washington state statutes or federal statutes or regulations.

December 20, 2013  
Katherine I. Vasquez  
Rules Coordinator

**WSR 14-02-036**  
**PROPOSED RULES**  
**SUPERINTENDENT OF**  
**PUBLIC INSTRUCTION**

[Filed December 23, 2013, 12:10 p.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-17-055.

Title of Rule and Other Identifying Information: K-3, High poverty funding—Process and definition of eligible schools.

Hearing Location(s): Office of Superintendent of Public Instruction (OSPI), Wanamaker [Wanamaker] Conference Room, 600 Washington Street, Olympia, WA 98504, on February 5, 2014, at 10:00 a.m.

Date of Intended Adoption: February 6, 2014.

Submit Written Comments to: T. J. Kelly, P.O. Box 47200, Olympia, WA 98504-7200, e-mail Thomas.Kelly@k12.wa.us, fax (360) 664-3683.

Assistance for Persons with Disabilities: Contact Wanda Griffin by February 1, 2014, TTY (360) 664-3631 or (360) 725-6133.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The 2013-15 Biennial Appropriations Act makes receipt of K-1 high poverty funding contingent on districts demonstrating hiring to meet the funded class size. Current rule does not inform districts as to if their schools are eligible for K-3 high poverty funding until October, after the school year starts. The intent of this CR-102 is to inform interested parties of changes in that timeline which will allow schools to be notified which schools are eligible to receive K-3 high poverty funds in the spring prior to the school year starting.

Reasons Supporting Proposal: To inform districts as to if they will be receiving funding in time for them to make staffing decisions and budget appropriately.

Statutory Authority for Adoption: RCW 28A.150.290 and 84.52.0531.

Rule is not necessitated by federal law, federal or state court decision.

Name of Agency Personnel Responsible for Drafting and Implementation: T. J. Kelly, OSPI, Olympia, Washington, (360) 725-6301; and Enforcement: JoLynn Berge, OSPI, Olympia, Washington, (360) 725-6292.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Not applicable.

A cost-benefit analysis is not required under RCW 34.05.328. OSPI is not subject to RCW 34.05.328 per subsection (5)(a)(1)(i)]. Additionally, this rule is not a significant legislative rule per subsection (5)(c)(iii).

December 23, 2013

Randy Dorn  
Superintendent of  
Public Instruction

AMENDATORY SECTION (Amending WSR 13-21-022, filed 10/7/13, effective 11/7/13)

**WAC 392-140-915 High poverty funding—Process and definition of eligible schools.** For the purposes of this section, an eligible school is one in which the free and reduced priced lunch percentage for students in grades K-6 exceeds fifty percent within the school building, and the school is not part of a district that receives any type of K-6 small school funding or the school does not receive remote and necessary funding. ~~((CEDARS data as of October of the previous school year will be used to determine school eligibility.))~~ If a school is determined to be eligible, the K-3 full-time equivalent enrollment as reported to the office of superintendent of public instruction on the P-223 will be used to generate funding at an enhanced class size as determined by the legislature.

~~((A preliminary CEDARS extract of October data will be pulled on March 31st to be used to determine a preliminary list of eligible schools to be published in April. This list will be used by districts as a basis for estimating the total eligible high poverty enrollment to be put into the F-203 for budgeting purposes. Districts will have until September 30th to make adjustments to this data before it is considered final for funding purposes.~~

~~A secondary CEDARS extract of October data will be pulled on July 30th. An updated list of eligible schools will be presented to districts in August.~~

~~On September 30th, the October CEDARS data for the previous school year will be considered final for K-3 high poverty funding purposes. A final data extract will be used to determine schools that are eligible for high poverty funding. Final determination of eligible schools for the current school year will be available in mid-October.))~~

CEDARS data as of October of the previous school year will be used to determine school eligibility. A CEDARS extract of October 1st data will be pulled on March 31st to be used as the basis for K-3 high poverty funding eligibility for the subsequent school year. The list of eligible schools will be published by mid April. No changes to CEDARS data made after March 31st will be considered, and appeals will not be allowed.

Funding of K-3 high poverty schools will be based upon budgeted K-3 enrollment in eligible high poverty schools as stated in a district's F-203 from September through December. Funding based on average annual full-time equivalent enrollment reported in final approved eligible schools will begin in January and continue through August. Districts must meet the legislative compliance requirements of the K-3 high poverty funding in order to retain the full allotment.

**WSR 14-02-058**  
**PROPOSED RULES**  
**DEPARTMENT OF HEALTH**  
 [Filed December 26, 2013, 11:18 a.m.]

Original Notice.

Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1).

Title of Rule and Other Identifying Information: Chapter 246-470 WAC, Prescription monitoring program, proposing amendments to rename the board of pharmacy to the pharmacy quality assurance commission, and make a correction to WAC 246-470-035 (2)(d) to clarify requirements for veterinarians reporting the dispensing of controlled substances to the department of health's (DOH) prescription monitoring program (PMP).

Hearing Location(s): DOH, Town Center 2, Conference Room 158, 111 Israel Road S.E., Tumwater, WA 98501, on February 4, 2014, at 11:00 a.m.

Date of Intended Adoption: February 5, 2014.

Submit Written Comments to: Chris Baumgartner, PMP Director, DOH, P.O. Box 47852, Olympia, WA 98504-7852, e-mail <http://www3.doh.wa.gov/policyreview/>, fax (360) 236-2901, by February 4, 2014.

Assistance for Persons with Disabilities: Contact Chris Baumgartner by January 29, 2014, TTY (800) 833-6388 or 711.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The purpose of the proposal is to correct an error that was adopted in rule (WSR 13-12-025, April 1, 2013) that established new WAC 246-470-035 Dispensing and data submission requirements for veterinarians. The proposed rule revises WAC 246-470-035 (2)(d) to clarify that veterinarians must report data elements to DOH's PMP for each schedule II, III, IV, and V controlled substance and other drugs dispensed for more than a fourteen-day supply, which was stated incorrectly in one section and correctly in another. The correct dispensing time period is more than a fourteen-day supply. In addition, the proposed rule revision renames the board of pharmacy to pharmacy quality assurance commission in WAC 246-470-010, 246-470-020, 246-470-030, and 246-470-035 per HB 1609 (chapter 19, Laws of 2013).

Reasons Supporting Proposal: Based on comments from the Washington State Veterinary Medical Association during the original rule making to amend reporting requirements for veterinarians, DOH decided to not require the reporting of controlled substance dispensing of prescriptions intended for a fourteen-day supply or less. The current rule contradicts itself. The proposed revision makes the section consistent and accurate. Finally, to make the rule consistent with the law, HB 1609 (chapter 19, Laws of 2013), the board of pharmacy is renamed to pharmacy quality assurance commission in WAC 246-470-010, 246-470-020, 246-470-030, and 246-470-035.

Statutory Authority for Adoption: RCW 70.225.020 and 70.225.025.

Statute Being Implemented: RCW 70.225.020.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: DOH, governmental.

Name of Agency Personnel Responsible for Drafting: Maura Craig, 111 Israel Road S.E., Tumwater, WA 98501, (360) 236-4997; Implementation and Enforcement: Chris Baumgartner, 111 Israel Road S.E., Tumwater, WA 98501, (360) 236-4806.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Under RCW 19.85.025 and 34.05.310 (4)(d), a small business economic impact statement is not required for proposed rules that only correct typographical errors, make address or name changes, or clarify the language of a rule without changing its effect.

A cost-benefit analysis is not required under RCW 34.05.328. The agency did not complete a cost-benefit analysis under RCW 34.05.328. RCW 34.05.328 (5)(b)(iv) exempts rules that only correct typographical errors, make address or name changes or clarify the language of a rule without changing its effect.

December 26, 2013  
 John Wiesman, DrPH, MPH  
 Secretary

AMENDATORY SECTION (Amending WSR 13-12-025, filed 5/28/13, effective 6/28/13)

**WAC 246-470-010 Definitions.** The definitions in this section apply throughout this chapter unless the context clearly indicates otherwise:

(1) "Authentication" means information, electronic device, or certificate provided by the department or their designee to a data requestor to electronically access prescription monitoring information. The authentication may include, but is not limited to, a user name, password, or an identification electronic device or certificate.

(2) "Controlled substance" has the same meaning provided in RCW 69.50.101.

(3) "Department" means the department of health.

(4) "Dispenser" means a practitioner or pharmacy that delivers to the ultimate user a schedule II, III, IV, or V controlled substance or other drugs identified by the ~~((board of))~~ pharmacy quality assurance commission in WAC 246-470-020, but does not include:

(a) A practitioner or other authorized person who only administers, as defined in RCW 69.41.010, a controlled substance or other drugs identified by the ~~((board of))~~ pharmacy quality assurance commission in WAC 246-470-020;

(b) A licensed wholesale distributor or manufacturer, as defined in chapter 18.64 RCW, of a controlled substance or other drugs identified by the ~~((board of))~~ pharmacy quality assurance commission in WAC 246-470-020; or

(c) A veterinarian licensed under chapter 18.92 RCW. Data submission requirements for veterinarians are included in WAC 246-470-035.

(5) "Patient" means the person or animal who is the ultimate user of a drug for whom a prescription is issued or for whom a drug is dispensed.

(6) "Patient address" means the current geographic location of the patient's residence. If the patient address is in care of another person or entity, the address of that person or entity is the "patient address" of record. When alternate

addresses are possible, they must be recorded in the following order of preference:

(a) The geographical location of the residence, as would be identified when a telephone is used to place a 9-1-1 call; or  
 (b) An address as listed by the United States Postal Service; or

(c) The common name of the residence and town.

(7) "Pharmacist" means a person licensed to engage in the practice of pharmacy.

(8) "Prescriber" means a licensed health care professional with authority to prescribe controlled substances.

(9) "Prescription monitoring information" means information submitted to and maintained by the prescription monitoring program.

(10) "Program" means the prescription monitoring program established under chapter 70.225 RCW.

(11) "Valid photographic identification" means:

(a) A driver's license or instruction permit issued by any United States state or province of Canada. If the patient's driver's license has expired, the patient must also show a valid temporary driver's license with the expired card.

(b) A state identification card issued by any United States state or province of Canada.

(c) An official passport issued by any nation.

(d) A United States armed forces identification card issued to active duty, reserve, and retired personnel and the personnel's dependents.

(e) A merchant marine identification card issued by the United States Coast Guard.

(f) A state liquor control identification card. An official age identification card issued by the liquor control authority of any United States state or Canadian province.

(g) An enrollment card issued by the governing authority of a federally recognized Indian tribe located in Washington, if the enrollment card incorporates security features comparable to those implemented by the department of licensing for Washington drivers' licenses and are recognized by the liquor control board.

**AMENDATORY SECTION** (Amending WSR 11-16-041, filed 7/27/11, effective 8/27/11)

**WAC 246-470-020 Adding additional drugs to the program.** Pursuant to RCW 70.225.020, the ((board of)) pharmacy quality assurance commission may add additional drugs to the list of drugs being monitored by the program by requesting the department amend these rules.

**AMENDATORY SECTION** (Amending WSR 13-12-025, filed 5/28/13, effective 6/28/13)

**WAC 246-470-030 Data submission requirements for dispensers.** (1) A dispenser shall provide to the department the dispensing information required by RCW 70.225.020 and this section for all scheduled II, III, IV, and V controlled substances and for drugs identified by the ((board of)) pharmacy quality assurance commission under WAC 246-470-020. Only drugs dispensed for more than one day use must be reported.

(2) Dispenser identification number. A dispenser shall acquire and maintain an identification number issued to dis-

persing pharmacies by the National Council for Prescription Drug Programs or a prescriber identifier issued to authorized prescribers of controlled substances by the Drug Enforcement Administration, United States Department of Justice.

(3) Submitting data. A dispenser shall submit data to the department electronically, not later than one week from the date of dispensing, and in the format required by the department.

(a) A dispenser shall submit for each dispensing the following information and any additional information required by the department:

(i) Patient identifier. A patient identifier is the unique identifier assigned to a particular patient by the dispenser;

(ii) Name of the patient for whom the prescription is ordered including first name, middle initial, last name, and generational suffixes, if any;

(iii) Patient date of birth;

(iv) Patient address;

(v) Patient gender;

(vi) Drug dispensed;

(vii) Date of dispensing;

(viii) Quantity and days supply dispensed;

(ix) Refill information;

(x) Prescriber identifier;

(xi) Prescription issued date;

(xii) Dispenser identifier;

(xiii) Prescription fill date and number;

(xiv) Source of payment indicated by one of the following:

(A) Private pay (cash, change, credit card, check);

(B) Medicaid;

(C) Medicare;

(D) Commercial insurance;

(E) Military installations and veterans affairs;

(F) Workers compensation;

(G) Indian nations;

(H) Other; and

(xv) When practicable, the name of person picking up or dropping off the prescription, as verified by valid photographic identification.

(b) A nonresident, licensed pharmacy that delivers controlled substances, as defined in RCW 18.64.360, is required to submit only the transactions for patients with a Washington state zip code.

(c) Data submission requirements do not apply to:

(i) The department of corrections or pharmacies operated by a county for the purpose of providing medications to offenders in state or county correctional institutions who are receiving pharmaceutical services from a state or county correctional institution's pharmacy. A state or county correctional institution's pharmacy must submit data to the program related to each offender's current prescriptions for controlled substances upon the offender's release from a state or county correctional institution.

(ii) Medications provided to patients receiving inpatient services provided at hospitals licensed under chapter 70.41 RCW or patients of such hospitals receiving services at the clinics, day surgery areas, or other settings within the hospital's license where the medications are administered in single doses; or medications provided to patients receiving outpa-

tient services provided at ambulatory surgical facilities licensed under chapter 70.230 RCW.

AMENDATORY SECTION (Amending WSR 13-12-025, filed 5/28/13, effective 6/28/13)

**WAC 246-470-035 Dispensing and data submission requirements for veterinarians.** A veterinarian licensed under chapter 18.92 RCW shall provide to the department the dispensing information required by RCW 70.225.020 and as provided in this section for all schedule II, III, IV and V controlled substances and for drugs identified by the ~~((board of))~~ pharmacy quality assurance commission under WAC 246-470-020.

(1) Dispenser identification number. A veterinarian shall acquire and maintain a prescriber identifier issued to authorized prescribers of controlled substances by the Drug Enforcement Administration, United States Department of Justice.

(2) Submitting data. A veterinarian shall:

(a) Report data for schedule II, III, IV, and V controlled substances, and other required drugs identified by the ~~((board of))~~ pharmacy quality assurance commission under WAC 246-470-020, dispensed for more than a fourteen-day supply;

(b) Report data using either electronic or nonelectronic methods provided by the department;

(c) Submit data quarterly. Data must be reported on the following schedule:

Reporting Period	Report Due Date
January - March	April 10
April - June	July 10
July - September	October 10
October - December	January 10

(d) Report the following data elements to the department for each schedule II, III, IV, and V controlled substance and other required drugs dispensed for more than a fourteen-day supply (~~or more~~):

(i) Name of the animal for whom the drug is dispensed including name of the animal or the animal's species (example: Feline) and the owner's last name;

(ii) Animal's date of birth, or if date of birth is unknown, enter January 1st of the estimated birth year;

(iii) Owner's name including first name, middle initial, last name, and generational suffixes, if any;

(iv) Owner's address;

(v) Drug dispensed;

(vi) Date the drug was dispensed;

(vii) Quantity and days supply dispensed;

(viii) Prescriber identifier;

(ix) Dispenser identifier; and

(x) When practicable, the identification number from a valid photo identification card of the owner.

**WSR 14-02-068**  
**PROPOSED RULES**  
**DEPARTMENT OF HEALTH**  
[Filed December 27, 2013, 2:15 p.m.]

Original Notice.

Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1).

Title of Rule and Other Identifying Information: Chapter 246-231 WAC, Packaging and transportation of radioactive material and chapter 246-240 WAC, Radiation protection—Medical use of radioactive material. Advance notice to Native American tribes pertaining to transportation of certain types of nuclear waste. The department is proposing to adopt federal rule changes (RATS #2012-2) to make the rule consistent with the federal Nuclear Regulatory Commission's rules, make editorial changes, and correct a cross-reference error.

Hearing Location(s): Department of Health, Town Center 2, Room 158, 111 Israel Road S.E., Tumwater, WA 98513, on February 25, 2014, at 10:00 a.m.

Date of Intended Adoption: March 14, 2014.

Submit Written Comments to: Michelle K. Austin, P.O. Box 47827, Tumwater, WA 98504-47827, e-mail <http://www3.doh.wa.gov/policyreview/>, fax (360) 236-2266, by February 25, 2014.

Assistance for Persons with Disabilities: Contact Michelle K. Austin by February 17, 2014, TTY (800) 833-6388 or 711.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The proposed rule incorporates the Nuclear Regulatory Commission's rule changes titled "2012-2: Advance notification to Native American tribes of transportation of certain types of nuclear waste." These revisions amend rules that govern packaging and transportation of radioactive material and physical protection of plants and materials. The amendments require licensees to provide advance notification to participating federally recognized tribal governments regarding shipments of irradiated reactor fuel and certain nuclear wastes for any shipment that passes within or across their reservations. The proposed rule also corrects an internal cross-reference in WAC 246-240-210.

Reasons Supporting Proposal: This rule making is required to comply with RCW 70.98.050 (4)(d) and a formal agreement signed between the state of Washington and the Atomic Energy Commission (predecessor to the Nuclear Regulatory Commission) under section 274 of the Atomic Energy Act of 1954 as amended (42 U.S.C. sec. 2021), and the Energy Policy Act of 2005. The office of radiation protection (the state radiation control program) is required to remain compatible with the Nuclear Regulatory Commission's rules. This is done through rule revisions to make Washington state rules consistent with Nuclear Regulatory Commission rules.

Statutory Authority for Adoption: RCW 70.98.050.

Statute Being Implemented: RCW 70.98.050.

Rule is necessary because of federal law, 77 F.R. 34194 and 74 F.R. 33901.

Name of Proponent: Department of health, governmental.



Name of Agency Personnel Responsible for Drafting, Implementation and Enforcement: Curt DeMaris, 111 Israel Road S.E., Tumwater, WA 98501, (360) 236-3323.

No small business economic impact statement has been prepared under chapter 19.85 RCW. Under RCW 19.85.025 and 34.05.310 (4)(c), a small business economic impact statement is not required for proposed rules that adopt or incorporate by reference, without material change, federal statutes or regulations, Washington state law, the rules of other Washington state agencies, or national consensus codes that generally establish industry standards.

A cost-benefit analysis is not required under RCW 34.05.328. The agency did not complete a cost-benefit analysis under RCW 34.05.328. RCW 34.05.328 (5)(b)(iii) exempts rules that adopt or incorporate by reference without material change federal statutes or regulations, Washington state law, the rules of other Washington state agencies, or national consensus codes that generally establish ind [no further information supplied by agency].

December 27, 2013

Jessica Todorovich

Deputy Secretary

for John Wiesman, DrPH, MPH

Secretary

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-001 Purpose and scope.** (1) This chapter establishes requirements for packaging, preparation for shipment, and transportation of radioactive material.

(2) Licensees shall also comply with applicable requirements of ~~((the United States Nuclear Regulatory Commission (USNRC), the United States Department of Transportation (USDOT)))~~ NRC, DOT, the United States Postal Service<sup>1</sup> ~~((USPS))~~, 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, ~~((USNRC))~~ NRC or an agreement state, 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.

<sup>1</sup> *Mailing Standards of the United States Postal Service, Domestic Mail Manual*, 39 C.F.R. 111.1.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-005 Requirement for license.** No licensee 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, ~~((USNRC))~~ NRC or an agreement state, or as exempted in this chapter.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-010 Definitions, abbreviations, and acronyms.** ~~The ((following terms are as defined here for the purpose of this chapter))~~ definitions, abbreviations, and acronyms in this section and in WAC 246-220-010 apply throughout this chapter unless the context clearly indicates otherwise. 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. This value is either listed in WAC 246-231-200, Table A-1 or may be derived in accordance with the procedures prescribed in WAC 246-231-200.

(2) "A2" means the maximum activity of radioactive material, other than special form material, LSA and SCO material, permitted in a Type A package. This value is 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) ~~((("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)).~~

~~((4))~~ (4) "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.

~~((5))~~ (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)))~~ NRC.

~~((6))~~ (5) "Certificate of compliance ~~((CoC))~~" means the certificate issued by ~~((the USNRC))~~ NRC under 10 C.F.R. 71 Subpart D which approves the design of a package for the transportation of radioactive material.

~~((7))~~ (6) "Close reflection by water" means immediate contact by water of sufficient thickness for maximum reflection of neutrons.

~~((8))~~ (7) "Consignment" means each shipment of a package or groups of packages or load of radioactive material offered by a shipper for transport.

~~((9))~~ (8) "Containment system" means the assembly of components of the packaging intended to retain the radioactive material during transport.

~~((10))~~ (9) "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 any aircraft.

~~((11))~~ (10) "Criticality safety index (CSI)" means the dimensionless number (rounded up to the next tenth) assigned to and placed on the label of a fissile material pack-

age, to designate the degree of control of accumulation of packages containing fissile material during transportation. Determination of the criticality safety index is described in WAC 246-231-094, 246-231-096, and 10 C.F.R. 71.59.

~~((12))~~ "Department" means the Washington state department of health, which has been designated as the state radiation control agency under chapter 70.98 RCW.

~~((13))~~ (11) "Deuterium" means, for the purposes of WAC 246-231-040 and 246-231-094, deuterium and any deuterium compounds, including heavy water, in which the ratio of deuterium atoms to hydrogen atoms exceeds 1:5000.

~~((14))~~ (12) "DOT" (~~and "USDOT"~~) means the United States Department of Transportation. ~~((USDOT))~~ DOT regulations are found in Code of Federal Regulations Title 49 Transportation.

~~((15))~~ (13) "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.

~~((16))~~ (14) "Fissile material" means the radionuclides uranium-233, uranium-235, plutonium-239, and plutonium-241, or any combination of these radionuclides. Fissile material means the fissile nuclides themselves, not material containing fissile nuclides. 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 WAC 246-231-040.

~~((17))~~ (15) "Graphite" means graphite with a boron equivalent content less than 5 parts per million and density greater than 1.5 grams per cubic centimeter.

~~((18))~~ "License" means a license issued by the department.

~~((19))~~ "Licensed material" means radioactive, by product, source, or special nuclear material received, possessed, used, or transferred under a general or specific license issued by the department pursuant to the regulations in this chapter, or issued by the USNRC or an agreement state pursuant to equivalent regulations.

~~((20))~~ "Licensee" means any person who is licensed by the department under these rules and the act.

~~((21))~~ (16) "Indian tribe" means an Indian or Alaskan native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a. A current listing of officially recognized Indian tribes may be found at: <http://www.bia.gov/cs/groups/mywesp/documents/text/idc-020733.pdf>.

(17) "Low specific activity (LSA) material" means radioactive material with limited specific activity which is nonfissile or is excepted under WAC 246-231-040 satisfies the descriptions and limits set forth below. Shielding materi-

als 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) Uranium and thorium ores, concentrates of uranium and thorium ores, and other ores containing naturally occurring radioactive radionuclides which are not intended to be processed for the use of these radionuclides; or

(ii) Solid unirradiated natural uranium or depleted uranium or natural thorium or their solid or liquid compounds or mixtures; or

(iii) Radioactive material for which the A2 value is unlimited; or

(iv) Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the value for exempt material activity concentration determined in accordance with Appendix A.

(b) LSA-II.

(i) Water with tritium concentration up to 0.8 TBq/liter (20.0 Ci/liter); or

(ii) Other material in which the activity 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), excluding powders, that satisfy the requirements of the 10 C.F.R. 71.77, 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 estimated average specific activity of the solid does not exceed 2E-3 A2/g.

~~((22))~~ (18) "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.

~~((23))~~ (19) "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))~~ NRC regulations 10 C.F.R. 71.71 (c)(1), in the absence of venting, external cooling by an ancillary system, or operational controls during transport.

~~((24))~~ (20) "Natural thorium" means thorium with the naturally occurring distribution of thorium isotopes (essentially 100 weight percent thorium-232).

~~((25))~~ (21) "Normal form radioactive material" means radioactive material that has not been demonstrated to qualify as "special form radioactive material."

~~((26))~~ (22) "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.

~~((27))~~ (23) "Optimum interspersed hydrogenous moderation" means the presence of hydrogenous material between packages to such an extent that the maximum nuclear reactivity results.

~~((28))~~ (24) "Package" means the packaging together with its radioactive contents as presented for transport.

(a) "Fissile material package" or Type AF package, Type BF package, Type B(U)F package or Type B(M)F package means a fissile material packaging together with its fissile material contents.

(b) "Type A package" means a Type A packaging together with its radioactive contents. A Type A package is defined and must comply with the ~~((USDOT))~~ DOT regulations in 49 C.F.R. 173.

(c) "Type B package" means a Type B packaging together with its radioactive contents. ~~((On))~~ Upon approval by ~~((the USNRC))~~ NRC, a Type B package design is designated by ~~((the USNRC))~~ NRC as B(U) unless the package has a maximum normal operating pressure of more than 700 kPa (100 lbs/in<sup>2</sup>) gauge or a pressure relief device that would allow the release of radioactive material to the environment under the tests specified in ~~((USNRC))~~ NRC regulations 10 C.F.R. 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 ~~((USDOT))~~ DOT regulations in 49 C.F.R. 173. A Type B package approved before September 6, 1983, was designated only as Type B. Limitations on its use are specified in 10 C.F.R. 71.19.

~~((29))~~ (25) "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.

~~((30))~~ (26) "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 10 C.F.R. 71.75. A special form encapsulation designed in accordance with ~~((the USNRC))~~ NRC requirements 10 C.F.R. 71.4 in effect on June 30, 1983, (see 10 C.F.R. 71, revised as of January 1, 1983), and constructed before July 1, 1985, and a special form encapsulation designed in accordance with the require-

ments of ~~((the USNRC))~~ NRC requirements in 10 C.F.R. 71.4 in effect on March 31, 1996 (see 10 C.F.R. 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.

~~((31))~~ (27) "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.

~~((32))~~ (28) "Spent nuclear fuel" or "spent fuel" means fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least one year's decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, by-product material, source material, and other radioactive materials associated with fuel assemblies.

~~((33))~~ (29) "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.

~~((34))~~ (30) "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 cm<sup>2</sup> (or the area of the surface if less than 300 cm<sup>2</sup>) does not exceed 4 Bq/cm<sup>2</sup> (1E-4 microcurie/cm<sup>2</sup>) for beta and gamma and low toxicity alpha emitters, or 0.4 Bq/cm<sup>2</sup> (1E-5 microcurie/cm<sup>2</sup>) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm<sup>2</sup> (or the area of the surface if less than 300 cm<sup>2</sup>) does not exceed 4E+4 Bq/cm<sup>2</sup> (1.0 microcurie/cm<sup>2</sup>) for beta and gamma and low toxicity alpha emitters, or 4E+3 Bq/cm<sup>2</sup> (0.1 microcurie/cm<sup>2</sup>) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm<sup>2</sup> (or the area of the surface if less than 300 cm<sup>2</sup>) does not exceed 4E+4 Bq/cm<sup>2</sup> (1 microcurie/cm<sup>2</sup>) for beta and gamma and low toxicity alpha emitters, or 4E+3 Bq/cm<sup>2</sup> (0.1 microcurie/cm<sup>2</sup>) 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 cm<sup>2</sup> (or the area of the surface if less than 300 cm<sup>2</sup>) does not exceed 400 Bq/cm<sup>2</sup> (1E-2 microcurie/cm<sup>2</sup>) for beta and gamma and low toxicity alpha emitters or 40 Bq/cm<sup>2</sup> (1E-3 microcurie/cm<sup>2</sup>) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm<sup>2</sup> (or the area of the surface if less than 300 cm<sup>2</sup>) does not exceed 8E+5 Bq/cm<sup>2</sup> (20 microcuries/cm<sup>2</sup>) for beta and gamma and low toxicity alpha emitters, or 8E+4 Bq/cm<sup>2</sup> (2 microcuries/cm<sup>2</sup>) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm<sup>2</sup> (or the area of the surface if less than 300 cm<sup>2</sup>) does not exceed 8E+5 Bq/cm<sup>2</sup> (20 microcuries/cm<sup>2</sup>) for beta and gamma and

low toxicity alpha emitters, or  $8E+4$  Bq/cm<sup>2</sup> (2 microcuries/cm<sup>2</sup>) for all other alpha emitters.

~~((35))~~ (31) "Transport index (TI)" 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 the number determined by multiplying the maximum radiation level in millisievert (mSv) per hour at 1 meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at 1 meter (3.3 ft)).

~~((36))~~ (32) "Tribal official" means the highest ranking individual who represents tribal leadership, such as the chief, president, or tribal council leadership.

(33) "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.

~~((37))~~ (34) "Type B quantity" means a quantity of radioactive material greater than a Type A quantity.

~~((38))~~ (35) "Unirradiated uranium" means uranium containing not more than  $2E+3$  Bq of plutonium per gram of uranium-235, not more than  $9E+6$  Bq of fission products per gram of uranium-235, and not more than  $5E-3$  g of uranium-236 per gram of uranium-235.

~~((39))~~ (36) 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.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**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, ((USNRC)) NRC or an agreement state, 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 ((USDOT)) DOT regulations in 49 C.F.R. 107, 171 through 180, and 390 through 397, appropriate to the mode of transport.

(a) The licensee shall particularly note ((USDOT)) DOT regulations in the following areas:

(i) Packaging—49 C.F.R. 173: Subparts A, B, and I.

(ii) Marking and labeling—49 C.F.R. 172: Subpart D, 172.400 through 172.407; and Subpart E, 172.436 through 172.441.

(iii) Placarding—49 C.F.R. 172: Subpart F, especially 172.500 through 172.519 and 172.556, and appendices B and C.

(iv) Accident reporting—49 C.F.R. 171.15 and 171.16.

(v) Shipping papers and emergency information—49 C.F.R. 172: Subparts C and G.

(vi) Hazardous material employee training—49 C.F.R. 172: Subpart H.

(vii) Security plans—49 C.F.R. 172: Subpart I.

(viii) Hazardous material shipper/carrier registration—49 C.F.R. 107: Subpart G.

(b) The licensee shall also note ((USDOT)) DOT regulations pertaining to the following modes of transportation:

(i) Rail—49 C.F.R. 174: Subparts A through D and K.

(ii) Air—49 C.F.R. 175.

(iii) Vessel—49 C.F.R. 176: Subparts A through F and M.

(iv) Public Highway—49 C.F.R. 177 and 390 through 397.

(2) If ((USDOT)) DOT regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of the ((USDOT)) DOT specified in ((paragraph)) subsection (1) of this section to the same extent as if the shipment or transportation were subject to ((USDOT)) 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)) NRC, Washington, D.C. 20555-0001.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**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 C.F.R. 170 through 189) or the United States Postal Service (*Mailing Standards of the United States Postal Service, Domestic Mail Manual*, 39 C.F.R. 111.1) 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)) DOT 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) **Exemption of physicians.** Any physician as defined in WAC 246-220-010 who is licensed by the department, ((the USNRC)) NRC or an agreement state, to dispense drugs in the practice of medicine, is exempt from WAC 246-220-030 with respect to transport by the physician of licensed material for use in the practice of medicine. However, any physician operating under this exemption must be licensed under chapter 246-240 WAC, 10 C.F.R. 35, or the equivalent agreement state regulations.

(4) **Exemption for low-level materials.** A licensee is exempt from all requirements of this chapter with respect to shipment or carriage of the following low-level materials:

(a) Natural material and ores containing naturally occurring radionuclides that are not intended to be processed for use of these radionuclides, provided the activity concentration of the material does not exceed ten times the values specified in WAC 246-231-200, Table A-2.

(b) Materials for which the activity concentration is not greater than the activity concentration values specified in WAC 246-231-200, Table A-2, or for which the consignment activity is not greater than the limit for an exempt consignment found in WAC 246-231-200, Table A-2.

(5) **Exemption from classification as fissile material.** Fissile material meeting at least one of the requirements in (a) through (f) of this subsection is exempt from classification as fissile material and from the fissile material package standards of 10 C.F.R. 71.55 and 71.59, but are subject to all other requirements of this chapter, except as noted.

(a) Individual package containing 2 grams or less fissile material.

(b) Individual or bulk packaging containing 15 grams or less of fissile material provided the package has at least 200 grams of solid nonfissile material for every gram of fissile material. Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass for solid nonfissile material.

(c)(i) Low concentrations of solid fissile material commingled with solid nonfissile material, provided that:

(A) There ~~((is))~~ are at least 2000 grams of solid nonfissile material for every gram of fissile material; and

(B) There ~~((is))~~ are no more than 180 grams of fissile material distributed within 360 kg of contiguous nonfissile material.

(ii) Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass of solid nonfissile material.

(d) Uranium enriched in uranium-235 to a maximum of 1 percent by weight, and with total plutonium and uranium-233 content of up to 1 percent of the mass of uranium-235, provided that the mass of any beryllium, graphite, and hydrogenous material enriched in deuterium constitutes less than 5 percent of the uranium mass.

(e) Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2 percent by mass, with a total plutonium and uranium-233 content not exceeding 0.002 percent of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2. The material must be contained in at least a ~~((USDOT))~~ DOT Type A package.

(f) Packages containing, individually, a total plutonium mass of not more than 1000 grams, of which not more than 20 percent by mass may consist of plutonium-239, plutonium-241, or any combination of these radionuclides.

AMENDATORY SECTION (Amending WSR 99-15-105, 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 carrier<sup>1</sup> 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 ~~((becquerels))~~ becquerels 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.

<sup>1</sup>(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.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-060 General license—~~((USNRC-approved)) NRC-approved package.~~** (1) A general license is hereby issued to any licensee of the department, ~~((USNRC)) NRC~~, or an agreement state, 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 USNRC)) NRC~~.

(2) This general license applies only to a licensee who has a quality assurance program approved by ~~((the USNRC)) NRC~~ as satisfying the provisions of 10 C.F.R. 71 Subpart H.

(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 10 C.F.R. 71 Subparts A, G, and H; and

(c) Before the licensee's first use of the package, submits in writing to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in 10 C.F.R. 71.1(a), 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 ~~((the USNRC)) NRC~~ before April 1, 1996, the general license is subject to the additional restrictions of 10 C.F.R. 71.19.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-090 General license—Use of foreign approved package.** (1) A general license is issued to any licensee of the department, ~~((USNRC)) NRC~~, or an agreement state, 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 ~~((USDOF)) DOT~~ as meeting the applicable requirements of 49 C.F.R. 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)) NRC~~ as satisfying the applicable provisions of 10 C.F.R. 71 Subpart H.

(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 10 C.F.R. 71 Subparts A, G, and H. With respect to the quality assurance provisions of Subpart H of 10 C.F.R. 71, the licensee is exempt from design, construction, and fabrication considerations.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-094 General license—Fissile material.**

(1) A general license is issued to any licensee of the department, ~~((USNRC)) NRC~~, or an agreement state, to transport fissile material, or to deliver fissile material to a carrier for transport, if the material is shipped in accordance with this section. The fissile material need not be contained in a package which meets the standards of 10 C.F.R. 71 Subparts E and F; however, the material must be contained in a Type A package. The Type A package must also meet the ~~((USDOF)) DOT~~ requirements of 49 C.F.R. 173.417(a).

(2) The general license applies only to a licensee who has a quality assurance program approved by ~~((the USNRC)) NRC~~ as satisfying the provisions of 10 C.F.R. 71 Subpart H.

(3) The general license applies only when a package's contents:

(a) Contain no more than a Type A quantity of radioactive material; and

(b) Contain less than 500 total grams of beryllium, graphite, or hydrogenous material enriched in deuterium.

(4) The general license applies only to packages containing fissile material that are labeled with a CSI which:

(a) Has been determined in accordance with subsection (5) of this section;

(b) Has a value less than or equal to 10; and

(c) For a shipment of multiple packages containing fissile material, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

(5)(a) The value for the CSI must be greater than or equal to the number calculated by the following equation:

$$CSI = 10 \left[ \frac{\text{grams of } ^{235}\text{U}}{X} + \frac{\text{grams of } ^{233}\text{U}}{Y} + \frac{\text{grams of Pu}}{Z} \right];$$

(b) The calculated CSI must be rounded up to the first decimal place;

(c) The values of X, Y, and Z used in the CSI equation must be taken from WAC 246-231-200 Table-1 or Table-2, as appropriate;

(d) If Table-2 is used to obtain the value of X, then the values for the terms in the equation for uranium-233 and plutonium must be assumed to be zero; and

(e) Values from Table-1 for X, Y, and Z must be used to determine the CSI if:

(i) Uranium-233 is present in the package;

(ii) The mass of plutonium exceeds 1 percent of the mass of uranium-235;

(iii) The uranium is of unknown uranium-235 enrichment or greater than 24 weight percent enrichment; or

(iv) Substances having a moderating effectiveness (i.e., an average hydrogen density greater than H<sub>2</sub>O) (e.g., certain hydrocarbon oils or plastics) are present in any form, except as polyethylene used for packing or wrapping.

**Table-1.**

**Mass Limits for General License Packages Containing Mixed Quantities of Fissile Material or Uranium-235 of Unknown Enrichment per WAC 246-231-094(5)**

Fissile material	Fissile material mass mixed with moderating substances having an average hydrogen density less than or equal to H <sub>2</sub> O (grams)	Fissile material mass mixed with moderating substances having an average hydrogen density greater than H <sub>2</sub> O <sup>a</sup> (grams)
<sup>235</sup> U (X)	60	38
<sup>233</sup> U (Y)	43	27
<sup>239</sup> Pu or <sup>241</sup> Pu (Z)	37	24

<sup>a</sup> When mixtures of moderating substances are present, the lower mass limits shall be used if more than 15 percent of the moderating substance has an average hydrogen density greater than H<sub>2</sub>O.

**Table-2.**

**Mass Limits for General License Packages Containing Uranium-235 of Known Enrichment per WAC 246-231-094(5)**

Uranium enrichment in weight percent of <sup>235</sup> U not exceeding	Fissile material mass of <sup>235</sup> U (X) (grams)
24	60
20	63
15	67
11	72
10	76
9.5	78
9	81
8.5	82
8	85
7.5	88
7	90
6.5	93
6	97
5.5	102
5	108

Uranium enrichment in weight percent of <sup>235</sup> U not exceeding	Fissile material mass of <sup>235</sup> U (X) (grams)
4.5	114
4	120
3.5	132
3	150
2.5	180
2	246
1.5	408
1.35	480
1	1,020
0.92	1,800

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency and appear in the Register pursuant to the requirements of RCW 34.08.040.

**AMENDATORY SECTION** (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-096 General license—Plutonium-beryllium special form material.** (1) A general license is issued to any licensee of the department, (~~(USNRC))~~ NRC or an agreement state, to transport fissile material in the form of plutonium-beryllium (Pu-Be) special form sealed sources, or to deliver Pu-Be sealed sources to a carrier for transport, if the material is shipped in accordance with this section. This material must be contained in a Type A package. The Type A package must also meet the (~~(USDOT))~~ DOT requirements of 49 C.F.R. 173.417(a).

(2) The general license applies only to a licensee who has a quality assurance program approved by (~~(the USNRC))~~ NRC as satisfying the provisions of 10 C.F.R. 71 Subpart H.

(3) The general license applies only when a package's contents:

(a) Contain no more than a Type A quantity of radioactive material; and

(b) Contain less than 1000 g of plutonium, provided that: Plutonium-239, plutonium-241, or any combination of these radionuclides, constitutes less than 240 g of the total quantity of plutonium in the package.

(4) The general license applies only to packages labeled with a CSI which:

(a) Has been determined in accordance with subsection (5) of this section;

(b) Has a value less than or equal to 100; and

(c) For a shipment of multiple packages containing Pu-Be sealed sources, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

(5)(a) The value for the CSI must be greater than or equal to the number calculated by the following equation:

$$CSI = 10 \left[ \frac{\text{grams of } ^{239}\text{Pu} + \text{grams of } ^{241}\text{Pu}}{24} \right]; \text{ and}$$

(b) The calculated CSI must be rounded up to the first decimal place.

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency and appear in the Register pursuant to the requirements of RCW 34.08.040.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-098 External radiation standards for all packages.** (1) Except as provided in subsection (2) of this section, each package of radioactive materials offered for transportation must be designed and prepared for shipment so that under conditions normally incident to transportation the radiation level does not exceed 2 mSv/((h)) hour (200 mrem/((h)) hour) at any point on the external surface of the package, and the transport index does not exceed 10.

(2) A package that exceeds the radiation level limits specified in subsection (1) of this section must be transported by exclusive use shipment only, and the radiation levels for such shipment must not exceed the following during transportation:

(a) 2 mSv/((h)) hour (200 mrem/((h)) hour) on the external surface of the package, unless the following conditions are met, in which case the limit is 10 mSv/((h)) hour (1000 mrem/((h)) hour):

- (i) The shipment is made in a closed transport vehicle;
- (ii) The package is secured within the vehicle so that its position remains fixed during transportation; and
- (iii) There are no loading or unloading operations between the beginning and end of the transportation;

(b) 2 mSv/((h)) hour (200 mrem/((h)) hour) at any point on the outer surface of the vehicle, including the top and underside of the vehicle; or in the case of a flat-bed style vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load or enclosure, if used, and on the lower external surface of the vehicle; and

(c) 0.1 mSv/((h)) hour (10 mrem/((h)) hour) at any point 2 meters (80 in) from the outer lateral surfaces of the vehicle (excluding the top and underside of the vehicle); or in the case of a flat-bed style vehicle, at any point 2 meters (6.6 feet) from the vertical planes projected by the outer edges of the vehicle (excluding the top and underside of the vehicle); and

(d) 0.02 mSv/((h)) hour (2 mrem/((h)) hour) in any normally occupied space, except that this provision does not apply to private carriers, if exposed personnel under their control wear radiation dosimetry devices in conformance with WAC 246-221-090 and 246-221-100.

(3) For shipments made under the provisions of subsection (2) of this section, the shipper shall provide specific written instructions to the carrier for maintenance of the exclusive use shipment controls. The instructions must be included with the shipping paper information.

(4) The written instructions required for exclusive use shipments must be sufficient so that, when followed, they will cause the carrier to avoid actions that will unnecessarily delay delivery or unnecessarily result in increased radiation levels or radiation exposures to transport workers or members of the general public.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-106 Preliminary determinations.** Before the first use of any packaging for the shipment of licensed material:

(1) The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce the effectiveness of the packaging;

(2) Where the maximum normal operating pressure will exceed 35 kPa (5 lbs/in<sup>2</sup>) 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

(3) The licensee shall conspicuously and durably mark the packaging with its model number, serial number, gross weight, and a package identification number assigned by ((the USNRC)) 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)) NRC.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**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 chapter 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;

(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 10 C.F.R. 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 ~~((USDOT))~~ DOT regulations in 49 C.F.R. 173.443;

(10) External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in WAC 246-231-098 at any time during transportation; and

(11) Accessible package surface temperatures will not exceed the limits specified in 10 C.F.R. 71.43(g) at any time during transportation.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-120 Air transport of plutonium.** (1) Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this chapter or included indirectly by citation of 49 C.F.R. 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 less than or equal to the activity concentration values for plutonium specified in WAC 246-231-200, Table A-2, 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))~~ NRC.

(2) Nothing in subsection (1) of this section is to be interpreted as removing or diminishing the requirements of ~~((USNRC))~~ NRC regulations 10 C.F.R. 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 C.F.R. 175.704 ~~((USDOT))~~ DOT regulations applicable to the air transport of plutonium.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-133 Public inspection of application.** Applications for approval of a package design under this chapter, which are submitted to ~~((the USNRC))~~ NRC, may be made available for public inspection, in accordance with provisions of 10 C.F.R. 2 and 9. This includes an application to amend or revise an existing package design, any associated documents and drawings submitted with the application, and any responses to ~~((USNRC))~~ NRC requests for additional information.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-136 Records.** (1) Each licensee shall maintain, for a period of three years after shipment, a record of each shipment of licensed material not exempt under WAC 246-231-040(4), showing where applicable:

(a) Identification of the packaging by model number and serial number;

(b) Verification that there are no significant defects in the packaging, as shipped;

(c) Volume and identification of coolant;

(d) Type and quantity of licensed material in each package, and the total quantity of each shipment;

(e) For each item of irradiated fissile material:

(i) Identification by model number and serial number;

(ii) Irradiation and decay history to the extent appropriate to demonstrate that its nuclear and thermal characteristics comply with license conditions; and

(iii) Any abnormal or unusual condition relevant to radiation safety;

(f) Date of the shipment;

(g) For fissile packages and for Type B packages, any special controls exercised;

(h) Name and address of the transferee;

(i) Address to which the shipment was made; and

(j) Results of the determinations required by WAC 246-231-110 and by the conditions of the package approval.

(2) Each certificate holder shall maintain, for a period of three years after the life of the packaging to which they apply, records identifying the packaging by model number, serial number, and date of manufacture.

(3) The licensee, certificate holder, and an applicant for a ~~((CoC))~~ certificate of compliance, shall make available to ~~((the USNRC))~~ NRC for inspection, upon reasonable notice, all records required by 10 C.F.R. 71.91. Records are only valid if stamped, initialed, or signed and dated by authorized personnel, or otherwise authenticated.

(4) The licensee, certificate holder, and an applicant for a ~~((CoC))~~ certificate of compliance shall maintain sufficient written records to furnish evidence of the quality of packaging. The records to be maintained include results of the determinations required by WAC 246-231-106; design, fabrication, and assembly records; results of reviews, inspections, tests, and audits; results of monitoring work performance and materials analyses; and results of maintenance, modification, and repair activities. Inspection, test, and audit records must identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. These records must be retained for three years after the life of the packaging to which they apply.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-140 Advance notification of shipment of irradiated reactor fuel and nuclear waste.** (1)(a) 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,))~~ within 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.

(b) As specified in subsections (2), (3), and (4) of this section, after June 11, 2013, each licensee shall provide advance notification to the tribal official of participating tribes referenced in subsection (3)(c)(iii) of this section, or the official's designee, of the shipment of licensed material within or across the boundary of the tribe's reservation 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 ~~((USNRC))~~ NRC regulations 10 C.F.R. 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, to the office of each appropriate tribal official or tribal official's designee, and to the Director, Division of ~~((Nuclear))~~ Security Policy, Office of Nuclear Security and Incident Response.

(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 any other means than mail must reach the office of the governor or ~~((of))~~ the governor's designee, or of the tribal official or the tribal official'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 of governors' designees and tribal officials' designees of participating tribes will be published annually in the *Federal Register* on or about June 30 to reflect any changes in information.

(ii) A list of the names and mailing addresses of the governors' designees and tribal officials' designees of participating tribes is available on request from the Director, Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management Programs, ~~((U.S. Nuclear Regulatory Commission))~~ NRC, Washington, D.C., 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 ~~((USDOT))~~ DOT in 49 C.F.R. 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 or tribal reservation 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, or a tribal official or tribal official'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 or the tribal official or the tribal official'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, to each tribal official or to the tribal official's designee previously notified, and to the Director, Division of ~~((Nuclear))~~ Security Policy, Office of Nuclear Security and Incident Response.

(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.

**AMENDATORY SECTION** (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-150 Quality assurance requirements.**

(1) Purpose. Quality assurance requirements apply to design,

purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, and modification of components of packaging that are important to safety. As used in this chapter, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a system or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to control of the physical characteristics and quality of the material or component to predetermined requirements. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance are responsible for the quality assurance requirements as they apply to design, fabrication, testing, and modification of packaging. Each licensee is responsible for the quality assurance provision which applies to its use of packaging for the shipment of licensed material subject to this chapter.

(2) Establishment of program. Each licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall establish, maintain, and execute a quality assurance program satisfying each of the applicable criteria in 10 C.F.R. 71.101 through 71.137 and satisfying any specific provisions that are applicable to the licensee's activities including procurement of packaging. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall execute the applicable criteria in a graded approach to an extent that is commensurate with the quality assurance requirement's importance to safety.

(3) Approval of program. Before the use of any package for the shipment of licensed material subject to this chapter, each licensee shall obtain ~~((USNRC))~~ NRC approval of its quality assurance program. Using an appropriate method listed in 10 C.F.R. 71.1(a), each licensee shall file a description of its quality assurance program, including a discussion of which requirements of 10 C.F.R. 71 Subpart H are applicable and how they will be satisfied, by submitting the description to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards.

(4) Radiography containers. A program for transport container inspection and maintenance limited to radiographic exposure devices, source changers, or packages transporting these devices and meeting the requirements of WAC 246-243-120(2), is deemed to satisfy the requirements of WAC 246-231-060(2) and 246-231-150(2).

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-170 Quality assurance program.** (1) The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall establish, at the earliest practicable time consistent with the schedule for accomplishing the activities, a quality assurance program that complies with the requirements of 10 C.F.R. 71.101 through 71.137. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance with those procedures throughout the period during which the packaging is used. The licensee,

certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall identify the material and components to be covered by the quality assurance program, the major organizations participating in the program, and the designated functions of these organizations.

(2) The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance, through its quality assurance program, shall provide control over activities affecting the quality of the identified materials and components to an extent consistent with their importance to safety, and as necessary to assure conformance to the approved design of each individual package used for the shipment of radioactive material. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall assure that activities affecting quality are accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall take into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test.

(3) The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall base the requirements and procedures of its quality assurance program on the following considerations concerning the complexity and proposed use of the package and its components:

- (a) The impact of malfunction or failure of the item to safety;
- (b) The design and fabrication complexity or uniqueness of the item;
- (c) The need for special controls and surveillance over processes and equipment;
- (d) The degree to which functional compliance can be demonstrated by inspection or test; and
- (e) The quality history and degree of standardization of the item.

(4) The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall provide for indoctrination and training of personnel performing activities affecting quality, as necessary to assure that suitable proficiency is achieved and maintained. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall review the status and adequacy of the quality assurance program at established intervals. Management of other organizations participating in the quality assurance program shall review regularly the status and adequacy of that part of the quality assurance program they are executing.

AMENDATORY SECTION (Amending WSR 08-09-093, filed 4/18/08, effective 5/19/08)

**WAC 246-231-186 Quality assurance records.** The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall maintain sufficient written records to describe the activities affecting quality. The records must include the instructions, procedures, and drawings required by 10 C.F.R. 71.111 to prescribe quality assurance activities

and must include closely related specifications such as required qualifications of personnel, procedures, and equipment. The records must include the instructions or procedures which establish a records retention program that is consistent with applicable regulations and designates factors such as duration, location, and assigned responsibility. The licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall retain these records for three years beyond the date when the licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance last engaged in the activity for which the quality assurance program was developed. If any portion of the written procedures or instructions is superseded, the licensee, certificate holder, and applicant for a ~~((C))~~ certificate of compliance shall retain the superseded material for three years after it is superseded.

AMENDATORY SECTION (Amending WSR 11-03-068, filed 1/18/11, effective 2/18/11)

**WAC 246-231-200 Appendix A—Determination of A1 and A2.** (1) Values of A1 and A2 for individual radionuclides, which are the basis for many activity limits elsewhere in these regulations, are given in this section, Table A-1. The curie (Ci) values specified are obtained by converting from the Terabecquerel (TBq) value. The Terabecquerel values are the regulatory standard. The curie values are for information only and are not intended to be the regulatory standard. 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.

(2)(a) For individual radionuclides whose identities are known, but which are not listed in this section, Table A-1, the A1 and A2 values contained in this section, Table A-3 may be used. Otherwise, the licensee shall obtain prior ~~((USNRC))~~ NRC approval of the A1 and A2 values for radionuclides not listed in this section, Table A-1, before shipping the material.

(b) For individual radionuclides whose identities are known, but which are not listed in this section, Table A-2, the exempt material activity concentration and exempt consignment activity values contained in this section, Table A-3 may be used. Otherwise, the licensee shall obtain prior ~~((USNRC))~~ NRC approval of the exempt material activity concentration and exempt consignment activity values for radionuclides not listed in this section, Table A-2, before shipping the material.

(c) The licensee shall submit requests for prior approval, described under (a) and (b) of this subsection, to ~~((the USNRC))~~ NRC in accordance with 10 C.F.R. 71.1.

(3) In the calculations of A1 and A2 for a radionuclide not in this section, Table A-1, a single radioactive decay chain, in which radionuclides are present in their naturally occurring proportions, and in which no daughter radionuclide has a half-life either longer than ten days, or longer than that of the parent radionuclide, 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 radionuclide of that chain. In the case of radioactive decay chains in which any daughter radionuclide has a half-life either longer than ten days, or greater than that of the parent radionuclide, the parent and those daughter radionu-

clides shall be considered as mixtures of different radionuclides.

(4) 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:

$$\sum_I \frac{B(i)}{A1(i)} \quad \text{less than or equal to } 1$$

Where B(i) is the activity of radionuclide I, and A1(i) is the A1 value for radionuclide I.

(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 A2(i) is the A2 value for radionuclide I.

(c) Alternatively, the 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 for radionuclide I in the mixture and A1(i) is the appropriate A1 value for radionuclide I.

(d) Alternatively, the 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 for radionuclide I in the mixture and A2(i) is the appropriate A2 value for radionuclide I.

(e) The exempt activity concentration for mixtures of nuclides may be determined as follows:

$$\text{Exempt activity concentration for mixture} = \frac{1}{\sum_i \frac{f(i)}{[A](i)}}$$

Where f(i) is the fraction of activity concentration of radionuclide I in the mixture, and A is the activity concentration of material containing radionuclide I.

(f) The activity limit for an exempt consignment for mixtures of radionuclides may be determined as follows:

$$\text{Exempt consignment activity limit for mixture} = \frac{1}{\sum_i \frac{f(i)}{A(i)}}$$

Where f(i) is the fraction of activity of radionuclide I in the mixture, and A is the activity limit for exempt consignments for radionuclide I.

(5) 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 subsection (4) of this section. 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.

Table A-1.—A1 and A2 Values for Radionuclides

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Ac-225 (a)	Actinium (89)	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	6.0X10 <sup>-3</sup>	1.6X10 <sup>-1</sup>	2.1X10 <sup>3</sup>	5.8X10 <sup>4</sup>
Ac-227 (a)		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	9.0X10 <sup>-5</sup>	2.4X10 <sup>-3</sup>	2.7	7.2X10 <sup>1</sup>
Ac-228		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	8.4X10 <sup>4</sup>	2.2X10 <sup>6</sup>
Ag-105	Silver (47)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>4</sup>
Ag-108m (a)		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	9.7X10 <sup>-1</sup>	2.6X10 <sup>1</sup>
Ag-110m (a)		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.8X10 <sup>2</sup>	4.7X10 <sup>3</sup>
Ag-111		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	5.8X10 <sup>3</sup>	1.6X10 <sup>5</sup>
Al-26	Aluminum (13)	1.0X10 <sup>-1</sup>	2.7	1.0X10 <sup>-1</sup>	2.7	7.0X10 <sup>-4</sup>	1.9X10 <sup>-2</sup>
Am-241	Americium (95)	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	1.3X10 <sup>-1</sup>	3.4
Am-242m (a)		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	3.6X10 <sup>-1</sup>	1.0X10 <sup>1</sup>
Am-243 (a)		5.0	1.4X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	7.4X10 <sup>-3</sup>	2.0X10 <sup>-1</sup>
Ar-37	Argon (18)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.7X10 <sup>3</sup>	9.9X10 <sup>4</sup>
Ar-39		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.3	3.4X10 <sup>1</sup>
Ar-41		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.5X10 <sup>6</sup>	4.2X10 <sup>7</sup>
As-72	Arsenic (33)	3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	6.2X10 <sup>4</sup>	1.7X10 <sup>6</sup>
As-73		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	8.2X10 <sup>2</sup>	2.2X10 <sup>4</sup>
As-74		1.0	2.7X10 <sup>1</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	3.7X10 <sup>3</sup>	9.9X10 <sup>4</sup>
As-76		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	5.8X10 <sup>4</sup>	1.6X10 <sup>6</sup>
As-77		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	3.9X10 <sup>4</sup>	1.0X10 <sup>6</sup>
At-211 (a)	Astatine (85)	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	7.6X10 <sup>4</sup>	2.1X10 <sup>6</sup>
Au-193	Gold (79)	7.0	1.9X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	3.4X10 <sup>4</sup>	9.2X10 <sup>5</sup>
Au-194		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.5X10 <sup>4</sup>	4.1X10 <sup>5</sup>
Au-195		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	6.0	1.6X10 <sup>2</sup>	1.4X10 <sup>2</sup>	3.7X10 <sup>3</sup>
Au-198		1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	9.0X10 <sup>3</sup>	2.4X10 <sup>5</sup>
Au-199		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	7.7X10 <sup>3</sup>	2.1X10 <sup>5</sup>
Ba-131 (a)	Barium (56)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	3.1X10 <sup>3</sup>	8.4X10 <sup>4</sup>
Ba-133		3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	9.4	2.6X10 <sup>2</sup>
Ba-133m		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.2X10 <sup>4</sup>	6.1X10 <sup>5</sup>
Ba-140 (a)		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	3.0X10 <sup>-1</sup>	8.1	2.7X10 <sup>3</sup>	7.3X10 <sup>4</sup>
Be-7	Beryllium (4)	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.3X10 <sup>4</sup>	3.5X10 <sup>5</sup>
Be-10		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	8.3X10 <sup>-4</sup>	2.2X10 <sup>-2</sup>
Bi-205	Bismuth (83)	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	1.5X10 <sup>3</sup>	4.2X10 <sup>4</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Bi-206		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	3.8X10 <sup>3</sup>	1.0X10 <sup>5</sup>
Bi-207		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	1.9	5.2X10 <sup>1</sup>
Bi-210		1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	4.6X10 <sup>3</sup>	1.2X10 <sup>5</sup>
Bi-210m (a)		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	2.1X10 <sup>-5</sup>	5.7X10 <sup>-4</sup>
Bi-212 (a)		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	5.4X10 <sup>5</sup>	1.5X10 <sup>7</sup>
Bk-247	Berkelium (97)	8.0	2.2X10 <sup>2</sup>	8.0X10 <sup>-4</sup>	2.2X10 <sup>-2</sup>	3.8X10 <sup>-2</sup>	1.0
Bk-249 (a)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>-1</sup>	8.1	6.1X10 <sup>1</sup>	1.6X10 <sup>3</sup>
Br-76	Bromine (35)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	9.4X10 <sup>4</sup>	2.5X10 <sup>6</sup>
Br-77		3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	2.6X10 <sup>4</sup>	7.1X10 <sup>5</sup>
Br-82		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>4</sup>	1.1X10 <sup>6</sup>
C-11	Carbon (6)	1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.1X10 <sup>7</sup>	8.4X10 <sup>8</sup>
C-14		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0	8.1X10 <sup>1</sup>	1.6X10 <sup>-1</sup>	4.5
Ca-41	Calcium (20)	Unlimited	Unlimited	Unlimited	Unlimited	3.1X10 <sup>-3</sup>	8.5X10 <sup>-2</sup>
Ca-45		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0	2.7X10 <sup>1</sup>	6.6X10 <sup>2</sup>	1.8X10 <sup>4</sup>
Ca-47 (a)		3.0	8.1X10 <sup>1</sup>	3.0X10 <sup>-1</sup>	8.1	2.3X10 <sup>4</sup>	6.1X10 <sup>5</sup>
Cd-109	Cadmium (48)	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	9.6X10 <sup>1</sup>	2.6X10 <sup>3</sup>
Cd-113m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	8.3	2.2X10 <sup>2</sup>
Cd-115 (a)		3.0	8.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.9X10 <sup>4</sup>	5.1X10 <sup>5</sup>
Cd-115m		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	9.4X10 <sup>2</sup>	2.5X10 <sup>4</sup>
Ce-139	Cerium (58)	7.0	1.9X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	2.5X10 <sup>2</sup>	6.8X10 <sup>3</sup>
Ce-141		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.8X10 <sup>4</sup>
Ce-143		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.5X10 <sup>4</sup>	6.6X10 <sup>5</sup>
Ce-144 (a)		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	1.2X10 <sup>2</sup>	3.2X10 <sup>3</sup>
Cf-248	Californium (98)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-3</sup>	1.6X10 <sup>-1</sup>	5.8X10 <sup>1</sup>	1.6X10 <sup>3</sup>
Cf-249		3.0	8.1X10 <sup>1</sup>	8.0X10 <sup>-4</sup>	2.2X10 <sup>-2</sup>	1.5X10 <sup>-1</sup>	4.1
Cf-250		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>-3</sup>	5.4X10 <sup>-2</sup>	4.0	1.1X10 <sup>2</sup>
Cf-251		7.0	1.9X10 <sup>2</sup>	7.0X10 <sup>-4</sup>	1.9X10 <sup>-2</sup>	5.9X10 <sup>-2</sup>	1.6
Cf-252 (h)		5.0X10 <sup>-2</sup>	1.4	3.0X10 <sup>-3</sup>	8.1X10 <sup>-2</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>
Cf-253 (a)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>-2</sup>	1.1	1.1X10 <sup>3</sup>	2.9X10 <sup>4</sup>
Cf-254		1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	3.1X10 <sup>2</sup>	8.5X10 <sup>3</sup>
Cl-36	Chlorine (17)	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.2X10 <sup>-3</sup>	3.3X10 <sup>-2</sup>
Cl-38		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	4.9X10 <sup>6</sup>	1.3X10 <sup>8</sup>
Cm-240	Curium (96)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	7.5X10 <sup>2</sup>	2.0X10 <sup>4</sup>
Cm-241		2.0	5.4X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	6.1X10 <sup>2</sup>	1.7X10 <sup>4</sup>
Cm-242		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0X10 <sup>-2</sup>	2.7X10 <sup>-1</sup>	1.2X10 <sup>2</sup>	3.3X10 <sup>3</sup>
Cm-243		9.0	2.4X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	1.9X10 <sup>-3</sup>	5.2X10 <sup>1</sup>
Cm-244		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>-3</sup>	5.4X10 <sup>-2</sup>	3.0	8.1X10 <sup>1</sup>
Cm-245		9.0	2.4X10 <sup>2</sup>	9.0X10 <sup>-4</sup>	2.4X10 <sup>-2</sup>	6.4X10 <sup>-3</sup>	1.7X10 <sup>-1</sup>
Cm-246		9.0	2.4X10 <sup>2</sup>	9.0X10 <sup>-4</sup>	2.4X10 <sup>-2</sup>	1.1X10 <sup>-2</sup>	3.1X10 <sup>-1</sup>
Cm-247 (a)		3.0	8.1X10 <sup>1</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	3.4X10 <sup>-6</sup>	9.3X10 <sup>-5</sup>
Cm-248		2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	3.0X10 <sup>-4</sup>	8.1X10 <sup>-3</sup>	1.6X10 <sup>-4</sup>	4.2X10 <sup>-3</sup>
Co-55	Cobalt (27)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	1.1X10 <sup>5</sup>	3.1X10 <sup>6</sup>
Co-56		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.1X10 <sup>3</sup>	3.0X10 <sup>4</sup>
Co-57		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	3.1X10 <sup>2</sup>	8.4X10 <sup>3</sup>
Co-58		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.2X10 <sup>3</sup>	3.2X10 <sup>4</sup>
Co-58m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.2X10 <sup>5</sup>	5.9X10 <sup>6</sup>
Co-60		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.2X10 <sup>1</sup>	1.1X10 <sup>3</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Cr-51	Chromium (24)	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.4X10 <sup>3</sup>	9.2X10 <sup>4</sup>
Cs-129	Cesium (55)	4.0	1.1X10 <sup>2</sup>	4.0	1.1X10 <sup>2</sup>	2.8X10 <sup>4</sup>	7.6X10 <sup>5</sup>
Cs-131		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.8X10 <sup>3</sup>	1.0X10 <sup>5</sup>
Cs-132		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	5.7X10 <sup>3</sup>	1.5X10 <sup>5</sup>
Cs-134		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	4.8X10 <sup>1</sup>	1.3X10 <sup>3</sup>
Cs-134m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.0X10 <sup>5</sup>	8.0X10 <sup>6</sup>
Cs-135		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0	2.7X10 <sup>1</sup>	4.3X10 <sup>-5</sup>	1.2X10 <sup>-3</sup>
Cs-136		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	2.7X10 <sup>3</sup>	7.3X10 <sup>4</sup>
Cs-137 (a)		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.2	8.7X10 <sup>1</sup>
Cu-64	Copper (29)	6.0	1.6X10 <sup>2</sup>	1.0	2.7X10 <sup>1</sup>	1.4X10 <sup>5</sup>	3.9X10 <sup>6</sup>
Cu-67		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	2.8X10 <sup>4</sup>	7.6X10 <sup>5</sup>
Dy-159	Dysprosium (66)	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.1X10 <sup>2</sup>	5.7X10 <sup>3</sup>
Dy-165		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.0X10 <sup>5</sup>	8.2X10 <sup>6</sup>
Dy-166 (a)		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	3.0X10 <sup>-1</sup>	8.1	8.6X10 <sup>3</sup>	2.3X10 <sup>5</sup>
Er-169	Erbium (68)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0	2.7X10 <sup>1</sup>	3.1X10 <sup>3</sup>	8.3X10 <sup>4</sup>
Er-171		8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	9.0X10 <sup>4</sup>	2.4X10 <sup>6</sup>
Eu-147	Europium (63)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	1.4X10 <sup>3</sup>	3.7X10 <sup>4</sup>
Eu-148		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	6.0X10 <sup>2</sup>	1.6X10 <sup>4</sup>
Eu-149		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	3.5X10 <sup>2</sup>	9.4X10 <sup>3</sup>
Eu-150 (short lived)		2.0	5.4X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.1X10 <sup>4</sup>	1.6X10 <sup>6</sup>
Eu-150 (long lived)		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.1X10 <sup>4</sup>	1.6X10 <sup>6</sup>
Eu-152		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	6.5	1.8X10 <sup>2</sup>
Eu-152m		8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	8.2X10 <sup>4</sup>	2.2X10 <sup>6</sup>
Eu-154		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	9.8	2.6X10 <sup>2</sup>
Eu-155		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	1.8X10 <sup>1</sup>	4.9X10 <sup>2</sup>
Eu-156		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	2.0X10 <sup>3</sup>	5.5X10 <sup>4</sup>
F-18	Fluorine (9)	1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.5X10 <sup>6</sup>	9.5X10 <sup>7</sup>
Fe-52 (a)	Iron (26)	3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	2.7X10 <sup>5</sup>	7.3X10 <sup>6</sup>
Fe-55		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	8.8X10 <sup>1</sup>	2.4X10 <sup>3</sup>
Fe-59		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	1.8X10 <sup>3</sup>	5.0X10 <sup>4</sup>
Fe-60 (a)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-1</sup>	5.4	7.4X10 <sup>-4</sup>	2.0X10 <sup>-2</sup>
Ga-67	Gallium (31)	7.0	1.9X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	2.2X10 <sup>4</sup>	6.0X10 <sup>5</sup>
Ga-68		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	1.5X10 <sup>6</sup>	4.1X10 <sup>7</sup>
Ga-72		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.1X10 <sup>5</sup>	3.1X10 <sup>6</sup>
Gd-146 (a)	Gadolinium (64)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	6.9X10 <sup>2</sup>	1.9X10 <sup>4</sup>
Gd-148		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>-3</sup>	5.4X10 <sup>-2</sup>	1.2	3.2X10 <sup>1</sup>
Gd-153		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	9.0	2.4X10 <sup>2</sup>	1.3X10 <sup>2</sup>	3.5X10 <sup>3</sup>
Gd-159		3.0	8.1X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.9X10 <sup>4</sup>	1.1X10 <sup>6</sup>
Ge-68 (a)	Germanium (32)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	2.6X10 <sup>2</sup>	7.1X10 <sup>3</sup>
Ge-71		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	5.8X10 <sup>3</sup>	1.6X10 <sup>5</sup>
Ge-77		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.3X10 <sup>5</sup>	3.6X10 <sup>6</sup>
Hf-172 (a)	Hafnium (72)	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	4.1X10 <sup>1</sup>	1.1X10 <sup>3</sup>
Hf-175		3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	3.9X10 <sup>2</sup>	1.1X10 <sup>4</sup>
Hf-181		2.0	5.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	6.3X10 <sup>2</sup>	1.7X10 <sup>4</sup>
Hf-182		Unlimited	Unlimited	Unlimited	Unlimited	8.1X10 <sup>-6</sup>	2.2X10 <sup>-4</sup>
Hg-194 (a)	Mercury (80)	1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.3X10 <sup>-1</sup>	3.5
Hg-195m (a)		3.0	8.1X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	1.5X10 <sup>4</sup>	4.0X10 <sup>5</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Hg-197		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	9.2X10 <sup>3</sup>	2.5X10 <sup>5</sup>
Hg-197m		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	2.5X10 <sup>4</sup>	6.7X10 <sup>5</sup>
Hg-203		5.0	1.4X10 <sup>2</sup>	1.0	2.7X10 <sup>1</sup>	5.1X10 <sup>2</sup>	1.4X10 <sup>4</sup>
Ho-166	Holmium (67)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	2.6X10 <sup>4</sup>	7.0X10 <sup>5</sup>
Ho-166m		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	6.6X10 <sup>-2</sup>	1.8
I-123	Iodine (53)	6.0	1.6X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	7.1X10 <sup>4</sup>	1.9X10 <sup>6</sup>
I-124		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	9.3X10 <sup>3</sup>	2.5X10 <sup>5</sup>
I-125		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	6.4X10 <sup>2</sup>	1.7X10 <sup>4</sup>
I-126		2.0	5.4X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	2.9X10 <sup>3</sup>	8.0X10 <sup>4</sup>
I-129		Unlimited	Unlimited	Unlimited	Unlimited	6.5X10 <sup>-6</sup>	1.8X10 <sup>-4</sup>
I-131		3.0	8.1X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	4.6X10 <sup>3</sup>	1.2X10 <sup>5</sup>
I-132		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	3.8X10 <sup>5</sup>	1.0X10 <sup>7</sup>
I-133		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	4.2X10 <sup>4</sup>	1.1X10 <sup>6</sup>
I-134		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	9.9X10 <sup>5</sup>	2.7X10 <sup>7</sup>
I-135 (a)		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.3X10 <sup>5</sup>	3.5X10 <sup>6</sup>
In-111	Indium (49)	3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	1.5X10 <sup>4</sup>	4.2X10 <sup>5</sup>
In-113m		4.0	1.1X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	6.2X10 <sup>5</sup>	1.7X10 <sup>7</sup>
In-114m (a)		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	8.6X10 <sup>2</sup>	2.3X10 <sup>4</sup>
In-115m		7.0	1.9X10 <sup>2</sup>	1.0	2.7X10 <sup>1</sup>	2.2X10 <sup>5</sup>	6.1X10 <sup>6</sup>
Ir-189 (a)	Iridium (77)	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.9X10 <sup>3</sup>	5.2X10 <sup>4</sup>
Ir-190		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	2.3X10 <sup>3</sup>	6.2X10 <sup>4</sup>
Ir-192 (c)		1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.4X10 <sup>2</sup>	9.2X10 <sup>3</sup>
Ir-194		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	3.1X10 <sup>4</sup>	8.4X10 <sup>5</sup>
K-40	Potassium (19)	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	2.4X10 <sup>-7</sup>	6.4X10 <sup>-6</sup>
K-42		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	2.2X10 <sup>5</sup>	6.0X10 <sup>6</sup>
K-43		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.2X10 <sup>5</sup>	3.3X10 <sup>6</sup>
Kr-81	Krypton (36)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	7.8X10 <sup>-4</sup>	2.1X10 <sup>-2</sup>
Kr-85		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.5X10 <sup>1</sup>	3.9X10 <sup>2</sup>
Kr-85m		8.0	2.2X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	3.0X10 <sup>5</sup>	8.2X10 <sup>6</sup>
Kr-87		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	1.0X10 <sup>6</sup>	2.8X10 <sup>7</sup>
La-137	Lanthanum (57)	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	6.0	1.6X10 <sup>2</sup>	1.6X10 <sup>-3</sup>	4.4X10 <sup>-2</sup>
La-140		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	2.1X10 <sup>4</sup>	5.6X10 <sup>5</sup>
Lu-172	Lutetium (71)	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	4.2X10 <sup>3</sup>	1.1X10 <sup>5</sup>
Lu-173		8.0	2.2X10 <sup>2</sup>	8.0	2.2X10 <sup>2</sup>	5.6X10 <sup>1</sup>	1.5X10 <sup>3</sup>
Lu-174		9.0	2.4X10 <sup>2</sup>	9.0	2.4X10 <sup>2</sup>	2.3X10 <sup>1</sup>	6.2X10 <sup>2</sup>
Lu-174m		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	2.0X10 <sup>2</sup>	5.3X10 <sup>3</sup>
Lu-177		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	4.1X10 <sup>3</sup>	1.1X10 <sup>5</sup>
Mg-28 (a)	Magnesium (12)	3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	2.0X10 <sup>5</sup>	5.4X10 <sup>6</sup>
Mn-52	Manganese (25)	3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.6X10 <sup>4</sup>	4.4X10 <sup>5</sup>
Mn-53		Unlimited	Unlimited	Unlimited	Unlimited	6.8X10 <sup>-5</sup>	1.8X10 <sup>-3</sup>
Mn-54		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	2.9X10 <sup>2</sup>	7.7X10 <sup>3</sup>
Mn-56		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	8.0X10 <sup>5</sup>	2.2X10 <sup>7</sup>
Mo-93	Molybdenum (42)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	4.1X10 <sup>-2</sup>	1.1
Mo-99 (a) (i)		1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.8X10 <sup>4</sup>	4.8X10 <sup>5</sup>
N-13	Nitrogen (7)	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	5.4X10 <sup>7</sup>	1.5X10 <sup>9</sup>
Na-22	Sodium (11)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	2.3X10 <sup>2</sup>	6.3X10 <sup>3</sup>
Na-24		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	3.2X10 <sup>5</sup>	8.7X10 <sup>6</sup>



Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Nb-93m	Niobium (41)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	8.8	2.4X10 <sup>2</sup>
Nb-94		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.9X10 <sup>-3</sup>	1.9X10 <sup>-1</sup>
Nb-95		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.5X10 <sup>3</sup>	3.9X10 <sup>4</sup>
Nb-97		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	9.9X10 <sup>5</sup>	2.7X10 <sup>7</sup>
Nd-147	Neodymium (60)	6.0	1.6X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.0X10 <sup>3</sup>	8.1X10 <sup>4</sup>
Nd-149		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	4.5X10 <sup>5</sup>	1.2X10 <sup>7</sup>
Ni-59	Nickel (28)	Unlimited	Unlimited	Unlimited	Unlimited	3.0X10 <sup>-3</sup>	8.0X10 <sup>-2</sup>
Ni-63		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	2.1	5.7X10 <sup>1</sup>
Ni-65		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	7.1X10 <sup>5</sup>	1.9X10 <sup>7</sup>
Np-235	Neptunium (93)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	5.2X10 <sup>1</sup>	1.4X10 <sup>3</sup>
Np-236 (short-lived)		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	4.7X10 <sup>-4</sup>	1.3X10 <sup>-2</sup>
Np-236 (long-lived)		9.0X10 <sup>0</sup>	2.4X10 <sup>2</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	4.7X10 <sup>-4</sup>	1.3X10 <sup>-2</sup>
Np-237		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>-3</sup>	5.4X10 <sup>-2</sup>	2.6X10 <sup>-5</sup>	7.1X10 <sup>-4</sup>
Np-239		7.0	1.9X10 <sup>2</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	8.6X10 <sup>3</sup>	2.3X10 <sup>5</sup>
Os-185	Osmium (76)	1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	2.8X10 <sup>2</sup>	7.5X10 <sup>3</sup>
Os-191		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	1.6X10 <sup>3</sup>	4.4X10 <sup>4</sup>
Os-191m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	4.6X10 <sup>4</sup>	1.3X10 <sup>6</sup>
Os-193		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.2X10 <sup>4</sup>	5.3X10 <sup>5</sup>
Os-194 (a)		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.1X10 <sup>1</sup>	3.1X10 <sup>2</sup>
P-32	Phosphorus (15)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	1.1X10 <sup>4</sup>	2.9X10 <sup>5</sup>
P-33		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0	2.7X10 <sup>1</sup>	5.8X10 <sup>3</sup>	1.6X10 <sup>5</sup>
Pa-230 (a)	Protactinium (91)	2.0	5.4X10 <sup>1</sup>	7.0X10 <sup>-2</sup>	1.9	1.2X10 <sup>3</sup>	3.3X10 <sup>4</sup>
Pa-231		4.0	1.1X10 <sup>2</sup>	4.0X10 <sup>-4</sup>	1.1X10 <sup>-2</sup>	1.7X10 <sup>-3</sup>	4.7X10 <sup>-2</sup>
Pa-233		5.0	1.4X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.7X10 <sup>2</sup>	2.1X10 <sup>4</sup>
Pb-201	Lead (82)	1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	6.2X10 <sup>4</sup>	1.7X10 <sup>6</sup>
Pb-202		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.2X10 <sup>-4</sup>	3.4X10 <sup>-3</sup>
Pb-203		4.0	1.1X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	1.1X10 <sup>4</sup>	3.0X10 <sup>5</sup>
Pb-205		Unlimited	Unlimited	Unlimited	Unlimited	4.5X10 <sup>-6</sup>	1.2X10 <sup>-4</sup>
Pb-210 (a)		1.0	2.7X10 <sup>1</sup>	5.0X10 <sup>-2</sup>	1.4	2.8	7.6X10 <sup>1</sup>
Pb-212 (a)		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	2.0X10 <sup>-1</sup>	5.4	5.1X10 <sup>4</sup>	1.4X10 <sup>6</sup>
Pd-103 (a)	Palladium (46)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.8X10 <sup>3</sup>	7.5X10 <sup>4</sup>
Pd-107		Unlimited	Unlimited	Unlimited	Unlimited	1.9X10 <sup>-5</sup>	5.1X10 <sup>-4</sup>
Pd-109		2.0	5.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	7.9X10 <sup>4</sup>	2.1X10 <sup>6</sup>
Pm-143	Promethium (61)	3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	1.3X10 <sup>2</sup>	3.4X10 <sup>3</sup>
Pm-144		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	9.2X10 <sup>1</sup>	2.5X10 <sup>3</sup>
Pm-145		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	5.2	1.4X10 <sup>2</sup>
Pm-147		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0	5.4X10 <sup>1</sup>	3.4X10 <sup>1</sup>	9.3X10 <sup>2</sup>
Pm-148m (a)		8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	7.9X10 <sup>2</sup>	2.1X10 <sup>4</sup>
Pm-149		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.5X10 <sup>4</sup>	4.0X10 <sup>5</sup>
Pm-151		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.7X10 <sup>4</sup>	7.3X10 <sup>5</sup>
Po-210	Polonium (84)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	1.7X10 <sup>2</sup>	4.5X10 <sup>3</sup>
Pr-142	Praseodymium (59)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.3X10 <sup>4</sup>	1.2X10 <sup>6</sup>
Pr-143		3.0	8.1X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.5X10 <sup>3</sup>	6.7X10 <sup>4</sup>
Pt-188 (a)	Platinum (78)	1.0	2.7X10 <sup>1</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	2.5X10 <sup>3</sup>	6.8X10 <sup>4</sup>
Pt-191		4.0	1.1X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	8.7X10 <sup>3</sup>	2.4X10 <sup>5</sup>
Pt-193		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.4	3.7X10 <sup>1</sup>
Pt-193m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.8X10 <sup>3</sup>	1.6X10 <sup>5</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Pt-195m		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	6.2X10 <sup>3</sup>	1.7X10 <sup>5</sup>
Pt-197		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.2X10 <sup>4</sup>	8.7X10 <sup>5</sup>
Pt-197m		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.7X10 <sup>5</sup>	1.0X10 <sup>7</sup>
Pu-236	Plutonium (94)	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.0X10 <sup>-3</sup>	8.1X10 <sup>-2</sup>	2.0X10 <sup>1</sup>	5.3X10 <sup>2</sup>
Pu-237		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	4.5X10 <sup>2</sup>	1.2X10 <sup>4</sup>
Pu-238		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	6.3X10 <sup>-1</sup>	1.7X10 <sup>1</sup>
Pu-239		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	2.3X10 <sup>-3</sup>	6.2X10 <sup>-2</sup>
Pu-240		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	8.4X10 <sup>-3</sup>	2.3X10 <sup>-1</sup>
Pu-241 (a)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-2</sup>	1.6	3.8	1.0X10 <sup>2</sup>
Pu-242		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	1.5X10 <sup>-4</sup>	3.9X10 <sup>-3</sup>
Pu-244 (a)		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	6.7X10 <sup>-7</sup>	1.8X10 <sup>-5</sup>
Ra-223 (a)	Radium (88)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	7.0X10 <sup>-3</sup>	1.9X10 <sup>-1</sup>	1.9X10 <sup>3</sup>	5.1X10 <sup>4</sup>
Ra-224 (a)		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	5.9X10 <sup>3</sup>	1.6X10 <sup>5</sup>
Ra-225 (a)		2.0X10 <sup>-1</sup>	5.4	4.0X10 <sup>-3</sup>	1.1X10 <sup>-1</sup>	1.5X10 <sup>3</sup>	3.9X10 <sup>4</sup>
Ra-226 (a)		2.0X10 <sup>-1</sup>	5.4	3.0X10 <sup>-3</sup>	8.1X10 <sup>-2</sup>	3.7X10 <sup>-2</sup>	1.0
Ra-228 (a)		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>
Rb-81	Rubidium (37)	2.0	5.4X10 <sup>1</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	3.1X10 <sup>5</sup>	8.4X10 <sup>6</sup>
Rb-83 (a)		2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	6.8X10 <sup>2</sup>	1.8X10 <sup>4</sup>
Rb-84		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.8X10 <sup>3</sup>	4.7X10 <sup>4</sup>
Rb-86		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	3.0X10 <sup>3</sup>	8.1X10 <sup>4</sup>
Rb-87		Unlimited	Unlimited	Unlimited	Unlimited	3.2X10 <sup>-9</sup>	8.6X10 <sup>-8</sup>
Rb (nat)		Unlimited	Unlimited	Unlimited	Unlimited	6.7X10 <sup>6</sup>	1.8X10 <sup>8</sup>
Re-184	Rhenium (75)	1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	6.9X10 <sup>2</sup>	1.9X10 <sup>4</sup>
Re-184m		3.0	8.1X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.6X10 <sup>2</sup>	4.3X10 <sup>3</sup>
Re-186		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.9X10 <sup>3</sup>	1.9X10 <sup>5</sup>
Re-187		Unlimited	Unlimited	Unlimited	Unlimited	1.4X10 <sup>-9</sup>	3.8X10 <sup>-8</sup>
Re-188		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	3.6X10 <sup>4</sup>	9.8X10 <sup>5</sup>
Re-189 (a)		3.0	8.1X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.5X10 <sup>4</sup>	6.8X10 <sup>5</sup>
Re (nat)		Unlimited	Unlimited	Unlimited	Unlimited	0.0	2.4X10 <sup>-8</sup>
Rh-99	Rhodium (45)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	3.0X10 <sup>3</sup>	8.2X10 <sup>4</sup>
Rh-101		4.0	1.1X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	4.1X10 <sup>1</sup>	1.1X10 <sup>3</sup>
Rh-102		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	4.5X10 <sup>1</sup>	1.2X10 <sup>3</sup>
Rh-102m		2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	2.3X10 <sup>2</sup>	6.2X10 <sup>3</sup>
Rh-103m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.2X10 <sup>6</sup>	3.3X10 <sup>7</sup>
Rh-105		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	3.1X10 <sup>4</sup>	8.4X10 <sup>5</sup>
Rn-222 (a)	Radon (86)	3.0X10 <sup>-1</sup>	8.1	4.0X10 <sup>-3</sup>	1.1X10 <sup>-1</sup>	5.7X10 <sup>3</sup>	1.5X10 <sup>5</sup>
Ru-97	Ruthenium (44)	5.0	1.4X10 <sup>2</sup>	5.0	1.4X10 <sup>2</sup>	1.7X10 <sup>4</sup>	4.6X10 <sup>5</sup>
Ru-103 (a)		2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	1.2X10 <sup>3</sup>	3.2X10 <sup>4</sup>
Ru-105		1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.5X10 <sup>5</sup>	6.7X10 <sup>6</sup>
Ru-106 (a)		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	1.2X10 <sup>2</sup>	3.3X10 <sup>3</sup>
S-35	Sulphur (16)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0	8.1X10 <sup>1</sup>	1.6X10 <sup>3</sup>	4.3X10 <sup>4</sup>
Sb-122	Antimony (51)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.5X10 <sup>4</sup>	4.0X10 <sup>5</sup>
Sb-124		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.5X10 <sup>2</sup>	1.7X10 <sup>4</sup>
Sb-125		2.0	5.4X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	3.9X10 <sup>1</sup>	1.0X10 <sup>3</sup>
Sb-126		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	3.1X10 <sup>3</sup>	8.4X10 <sup>4</sup>
Sc-44	Scandium (21)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	6.7X10 <sup>5</sup>	1.8X10 <sup>7</sup>
Sc-46		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	1.3X10 <sup>3</sup>	3.4X10 <sup>4</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Sc-47		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	3.1X10 <sup>4</sup>	8.3X10 <sup>5</sup>
Sc-48		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	5.5X10 <sup>4</sup>	1.5X10 <sup>6</sup>
Se-75	Selenium (34)	3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.5X10 <sup>4</sup>
Se-79		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0	5.4X10 <sup>1</sup>	2.6X10 <sup>-3</sup>	7.0X10 <sup>-2</sup>
Si-31	Silicon (14)	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.4X10 <sup>6</sup>	3.9X10 <sup>7</sup>
Si-32		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	3.9	1.1X10 <sup>2</sup>
Sm-145	Samarium (62)	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	9.8X10 <sup>1</sup>	2.6X10 <sup>3</sup>
Sm-147		Unlimited	Unlimited	Unlimited	Unlimited	8.5X10 <sup>-1</sup>	2.3X10 <sup>-8</sup>
Sm-151		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	9.7X10 <sup>-1</sup>	2.6X10 <sup>1</sup>
Sm-153		9.0	2.4X10 <sup>2</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.6X10 <sup>4</sup>	4.4X10 <sup>5</sup>
Sn-113 (a)	Tin (50)	4.0	1.1X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	3.7X10 <sup>2</sup>	1.0X10 <sup>4</sup>
Sn-117m		7.0	1.9X10 <sup>2</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	3.0X10 <sup>3</sup>	8.2X10 <sup>4</sup>
Sn-119m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	1.4X10 <sup>2</sup>	3.7X10 <sup>3</sup>
Sn-121m (a)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>
Sn-123		8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	3.0X10 <sup>2</sup>	8.2X10 <sup>3</sup>
Sn-125		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>3</sup>	1.1X10 <sup>5</sup>
Sn-126 (a)		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.0X10 <sup>-3</sup>	2.8X10 <sup>-2</sup>
Sr-82 (a)	Strontium (38)	2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	2.3X10 <sup>3</sup>	6.2X10 <sup>4</sup>
Sr-85		2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	8.8X10 <sup>2</sup>	2.4X10 <sup>4</sup>
Sr-85m		5.0	1.4X10 <sup>2</sup>	5.0	1.4X10 <sup>2</sup>	1.2X10 <sup>6</sup>	3.3X10 <sup>7</sup>
Sr-87m		3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	4.8X10 <sup>5</sup>	1.3X10 <sup>7</sup>
Sr-89		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.9X10 <sup>4</sup>
Sr-90 (a)		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	5.1	1.4X10 <sup>2</sup>
Sr-91 (a)		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.3X10 <sup>5</sup>	3.6X10 <sup>6</sup>
Sr-92 (a)		1.0	2.7X10 <sup>1</sup>	3.0X10 <sup>-1</sup>	8.1	4.7X10 <sup>5</sup>	1.3X10 <sup>7</sup>
T(H-3)	Tritium (1)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.6X10 <sup>2</sup>	9.7X10 <sup>3</sup>
Ta-178 (long-lived)	Tantalum (73)	1.0	2.7X10 <sup>1</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	4.2X10 <sup>6</sup>	1.1X10 <sup>8</sup>
Ta-179		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	4.1X10 <sup>1</sup>	1.1X10 <sup>3</sup>
Ta-182		9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	2.3X10 <sup>2</sup>	6.2X10 <sup>3</sup>
Tb-157	Terbium (65)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	5.6X10 <sup>-1</sup>	1.5X10 <sup>1</sup>
Tb-158		1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	5.6X10 <sup>-1</sup>	1.5X10 <sup>1</sup>
Tb-160		1.0	2.7X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	4.2X10 <sup>2</sup>	1.1X10 <sup>4</sup>
Tc-95m (a)	Technetium (43)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	8.3X10 <sup>2</sup>	2.2X10 <sup>4</sup>
Tc-96		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.2X10 <sup>4</sup>	3.2X10 <sup>5</sup>
Tc-96m (a)		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.4X10 <sup>6</sup>	3.8X10 <sup>7</sup>
Tc-97		Unlimited	Unlimited	Unlimited	Unlimited	5.2X10 <sup>-5</sup>	1.4X10 <sup>-3</sup>
Tc-97m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0	2.7X10 <sup>1</sup>	5.6X10 <sup>2</sup>	1.5X10 <sup>4</sup>
Tc-98		8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	3.2X10 <sup>-5</sup>	8.7X10 <sup>-4</sup>
Tc-99		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.3X10 <sup>-4</sup>	1.7X10 <sup>-2</sup>
Tc-99m		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	4.0	1.1X10 <sup>2</sup>	1.9X10 <sup>5</sup>	5.3X10 <sup>6</sup>
Te-121	Tellurium (52)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	2.4X10 <sup>3</sup>	6.4X10 <sup>4</sup>
Te-121m		5.0	1.4X10 <sup>2</sup>	3.0	8.1X10 <sup>1</sup>	2.6X10 <sup>2</sup>	7.0X10 <sup>3</sup>
Te-123m		8.0	2.2X10 <sup>2</sup>	1.0	2.7X10 <sup>1</sup>	3.3X10 <sup>2</sup>	8.9X10 <sup>3</sup>
Te-125m		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.7X10 <sup>2</sup>	1.8X10 <sup>4</sup>
Te-127		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	9.8X10 <sup>4</sup>	2.6X10 <sup>6</sup>
Te-127m (a)		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	3.5X10 <sup>2</sup>	9.4X10 <sup>3</sup>
Te-129		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	7.7X10 <sup>5</sup>	2.1X10 <sup>7</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
Te-129m (a)		8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>4</sup>
Te-131m (a)		7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	3.0X10 <sup>4</sup>	8.0X10 <sup>5</sup>
Te-132 (a)		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	3.1X10 <sup>4</sup>	3.0X10 <sup>5</sup>
Th-227	Thorium (90)	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	5.0X10 <sup>-3</sup>	1.4X10 <sup>-1</sup>	1.1X10 <sup>3</sup>	3.1X10 <sup>4</sup>
Th-228 (a)		5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	3.0X10 <sup>1</sup>	8.2X10 <sup>2</sup>
Th-229		5.0	1.4X10 <sup>2</sup>	5.0X10 <sup>-4</sup>	1.4X10 <sup>-2</sup>	7.9X10 <sup>-3</sup>	2.1X10 <sup>-1</sup>
Th-230		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	7.6X10 <sup>-4</sup>	2.1X10 <sup>-2</sup>
Th-231		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	2.0X10 <sup>4</sup>	5.3X10 <sup>5</sup>
Th-232		Unlimited	Unlimited	Unlimited	Unlimited	4.0X10 <sup>-9</sup>	1.1X10 <sup>-7</sup>
Th-234 (a)		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	8.6X10 <sup>2</sup>	2.3X10 <sup>4</sup>
Th(nat)		Unlimited	Unlimited	Unlimited	Unlimited	8.1X10 <sup>-9</sup>	2.2X10 <sup>-7</sup>
Ti-44 (a)	Titanium (22)	5.0X10 <sup>-1</sup>	1.4X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	6.4	1.7X10 <sup>2</sup>
Tl-200	Thallium (81)	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	2.2X10 <sup>4</sup>	6.0X10 <sup>5</sup>
Tl-201		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	4.0	1.1X10 <sup>2</sup>	7.9X10 <sup>3</sup>	2.1X10 <sup>5</sup>
Tl-202		2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	2.0X10 <sup>3</sup>	5.3X10 <sup>4</sup>
Tl-204		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	1.7X10 <sup>1</sup>	4.6X10 <sup>2</sup>
Tm-167	Thulium (69)	7.0	1.9X10 <sup>2</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	3.1X10 <sup>3</sup>	8.5X10 <sup>4</sup>
Tm-170		3.0	8.1X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.2X10 <sup>2</sup>	6.0X10 <sup>3</sup>
Tm-171		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>
U-230 (fast lung absorption) (a)(d)	Uranium (92)	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0X10 <sup>-1</sup>	2.7	1.0X10 <sup>3</sup>	2.7X10 <sup>4</sup>
U-230 (medium lung absorption) (a)(e)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>-3</sup>	1.1X10 <sup>-1</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>4</sup>
U-230 (slow lung absorption) (a)(f)		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.0X10 <sup>-3</sup>	8.1X10 <sup>-2</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>4</sup>
U-232 (fast lung absorption) (d)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	1.0X10 <sup>-2</sup>	2.7X10 <sup>-1</sup>	8.3X10 <sup>-1</sup>	2.2X10 <sup>1</sup>
U-232 (medium lung absorption) (e)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	7.0X10 <sup>-3</sup>	1.9X10 <sup>-1</sup>	8.3X10 <sup>-1</sup>	2.2X10 <sup>1</sup>
U-232 (slow lung absorption) (f)		1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	1.0X10 <sup>-3</sup>	2.7X10 <sup>-2</sup>	8.3X10 <sup>-1</sup>	2.2X10 <sup>1</sup>
U-233 (fast lung absorption) (d)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	9.0X10 <sup>-2</sup>	2.4	3.6X10 <sup>-4</sup>	9.7X10 <sup>-3</sup>
U-233 (medium lung absorption) (e)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	3.6X10 <sup>-4</sup>	9.7X10 <sup>-3</sup>
U-233 (slow lung absorption) (f)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-3</sup>	1.6X10 <sup>-1</sup>	3.6X10 <sup>-4</sup>	9.7X10 <sup>-3</sup>
U-234 (fast lung absorption) (d)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	9.0X10 <sup>-2</sup>	2.4	2.3X10 <sup>-4</sup>	6.2X10 <sup>-3</sup>
U-234 (medium lung absorption) (e)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	2.3X10 <sup>-4</sup>	6.2X10 <sup>-3</sup>
U-234 (slow lung absorption) (f)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-3</sup>	1.6X10 <sup>-1</sup>	2.3X10 <sup>-4</sup>	6.2X10 <sup>-3</sup>
U-235 (all lung absorption types) (a), (d), (e), (f)		Unlimited	Unlimited	Unlimited	Unlimited	8.0X10 <sup>-8</sup>	2.2X10 <sup>-6</sup>
U-236 (fast lung absorption) (d)		Unlimited	Unlimited	Unlimited	Unlimited	2.4X10 <sup>-6</sup>	6.5X10 <sup>-5</sup>
U-236 (medium lung absorption) (e)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	2.0X10 <sup>-2</sup>	5.4X10 <sup>-1</sup>	2.4X10 <sup>-6</sup>	6.5X10 <sup>-5</sup>
U-236 (slow lung absorption) (f)		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	6.0X10 <sup>-3</sup>	1.6X10 <sup>-1</sup>	2.4X10 <sup>-6</sup>	6.5X10 <sup>-5</sup>
U-238 (all lung absorption types) (d), (e), (f)		Unlimited	Unlimited	Unlimited	Unlimited	1.2X10 <sup>-8</sup>	3.4X10 <sup>-7</sup>

Symbol of radionuclide	Element and atomic number	A1 (TBq)	A1 (Ci) <sup>b</sup>	A2 (TBq)	A2 (Ci) <sup>b</sup>	Specific activity	
						(TBq/g)	(Ci/g)
U (nat)		Unlimited	Unlimited	Unlimited	Unlimited	2.6X10 <sup>-8</sup>	7.1X10 <sup>-7</sup>
U (enriched to 20% or less) (g)		Unlimited	Unlimited	Unlimited	Unlimited	See Table A-4	See Table A-4
U (dep)		Unlimited	Unlimited	Unlimited	Unlimited	See Table A-4	See Table A-3
V-48	Vanadium (23)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	6.3X10 <sup>3</sup>	1.7X10 <sup>5</sup>
V-49		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.0X10 <sup>2</sup>	8.1X10 <sup>3</sup>
W-178 (a)	Tungsten (74)	9.0	2.4X10 <sup>2</sup>	5.0	1.4X10 <sup>2</sup>	1.3X10 <sup>3</sup>	3.4X10 <sup>4</sup>
W-181		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	2.2X10 <sup>2</sup>	6.0X10 <sup>3</sup>
W-185		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	3.5X10 <sup>2</sup>	9.4X10 <sup>3</sup>
W-187		2.0	5.4X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	2.6X10 <sup>4</sup>	7.0X10 <sup>5</sup>
W-188 (a)		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	3.0X10 <sup>-1</sup>	8.1	3.7X10 <sup>2</sup>	1.0X10 <sup>4</sup>
Xe-122 (a)	Xenon (54)	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.8X10 <sup>4</sup>	1.3X10 <sup>6</sup>
Xe-123		2.0	5.4X10 <sup>1</sup>	7.0X10 <sup>-1</sup>	1.9X10 <sup>1</sup>	4.4X10 <sup>5</sup>	1.2X10 <sup>7</sup>
Xe-127		4.0	1.1X10 <sup>2</sup>	2.0	5.4X10 <sup>1</sup>	1.0X10 <sup>3</sup>	2.8X10 <sup>4</sup>
Xe-131m		4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	4.0X10 <sup>1</sup>	1.1X10 <sup>3</sup>	3.1X10 <sup>3</sup>	8.4X10 <sup>4</sup>
Xe-133		2.0X10 <sup>1</sup>	5.4X10 <sup>2</sup>	1.0X10 <sup>1</sup>	2.7X10 <sup>2</sup>	6.9X10 <sup>3</sup>	1.9X10 <sup>5</sup>
Xe-135		3.0	8.1X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	9.5X10 <sup>4</sup>	2.6X10 <sup>6</sup>
Y-87 (a)	Yttrium (39)	1.0	2.7X10 <sup>1</sup>	1.0	2.7X10 <sup>1</sup>	1.7X10 <sup>4</sup>	4.5X10 <sup>5</sup>
Y-88		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	5.2X10 <sup>2</sup>	1.4X10 <sup>4</sup>
Y-90		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	2.0X10 <sup>4</sup>	5.4X10 <sup>5</sup>
Y-91		6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	9.1X10 <sup>2</sup>	2.5X10 <sup>4</sup>
Y-91m		2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	1.5X10 <sup>6</sup>	4.2X10 <sup>7</sup>
Y-92		2.0X10 <sup>-1</sup>	5.4	2.0X10 <sup>-1</sup>	5.4	3.6X10 <sup>5</sup>	9.6X10 <sup>6</sup>
Y-93		3.0X10 <sup>-1</sup>	8.1	3.0X10 <sup>-1</sup>	8.1	1.2X10 <sup>5</sup>	3.3X10 <sup>6</sup>
Yb-169	Ytterbium (70)	4.0	1.1X10 <sup>2</sup>	1.0	2.7X10 <sup>1</sup>	8.9X10 <sup>2</sup>	2.4X10 <sup>4</sup>
Yb-175		3.0X10 <sup>1</sup>	8.1X10 <sup>2</sup>	9.0X10 <sup>-1</sup>	2.4X10 <sup>1</sup>	6.6X10 <sup>3</sup>	1.8X10 <sup>5</sup>
Zn-65	Zinc (30)	2.0	5.4X10 <sup>1</sup>	2.0	5.4X10 <sup>1</sup>	3.0X10 <sup>2</sup>	8.2X10 <sup>3</sup>
Zn-69		3.0	8.1X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.8X10 <sup>6</sup>	4.9X10 <sup>7</sup>
Zn-69m (a)		3.0	8.1X10 <sup>1</sup>	6.0X10 <sup>-1</sup>	1.6X10 <sup>1</sup>	1.2X10 <sup>5</sup>	3.3X10 <sup>6</sup>
Zr-88	Zirconium (40)	3.0	8.1X10 <sup>1</sup>	3.0	8.1X10 <sup>1</sup>	6.6X10 <sup>2</sup>	1.8X10 <sup>4</sup>
Zr-93		Unlimited	Unlimited	Unlimited	Unlimited	9.3X10 <sup>-5</sup>	2.5X10 <sup>-3</sup>
Zr-95 (a)		2.0	5.4X10 <sup>1</sup>	8.0X10 <sup>-1</sup>	2.2X10 <sup>1</sup>	7.9X10 <sup>2</sup>	2.1X10 <sup>4</sup>
Zr-97 (a)		4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	4.0X10 <sup>-1</sup>	1.1X10 <sup>1</sup>	7.1X10 <sup>4</sup>	1.9X10 <sup>6</sup>

- (a) A<sub>1</sub> (~~and~~) or A<sub>2</sub> values include contributions from daughter nuclides with half-lives less than ten days.
- (b) (Reserved.)
- (c) The quantity may be determined from a measurement of the rate of decay or a measurement of the radiation level at a prescribed distance from the source.
- (d) These values apply only to compounds of uranium that take the chemical form of UF<sub>6</sub>, UO<sub>2</sub>F<sub>2</sub> and UO<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub> in both normal and accident conditions of transport.
- (e) These values apply only to compounds of uranium that take the chemical form of UO<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds in both normal and accident conditions of transport.
- (f) These values apply to all compounds of uranium other than those specified in notes (d) and (e) of this table.
- (g) These values apply to unirradiated uranium only.
- (h) A<sub>1</sub> = 0.1 TBq (2.7 Ci) and A<sub>2</sub> = 0.001 TBq (0.027 Ci) for Cf-252 for domestic use.
- (i) A<sub>2</sub> = 0.74 TBq (20 Ci) for Mo-99 for domestic use.

Table A-2.—Exempt Material Activity Concentrations and Exempt Consignment Activity Limits for Radionuclides

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Ac-225	Actinium (89)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ac-227	-	1.0X10 <sup>-1</sup>	2.7X10 <sup>-12</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Ac-228	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-105	Silver (47)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-108m (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-110m	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ag-111	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Al-26	Aluminum (13)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Am-241	Americium (95)	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Am-242m (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Am-243 (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Ar-37	Argon (18)	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ar-39	-	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ar-41	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
As-72	Arsenic (33)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
As-73	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
As-74	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
As-76	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
As-77	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
At-211	Astatine (85)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Au-193	Gold (79)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Au-194	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Au-195	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Au-198	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Au-199	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ba-131	Barium (56)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ba-133	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ba-133m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ba-140 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Be-7	Beryllium (4)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Be-10	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Bi-205	Bismuth (83)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Bi-206	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Bi-207	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Bi-210	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Bi-210m	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Bi-212 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Bk-247	Berkelium (97)	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Bk-249	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Br-76	Bromine (35)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Br-77	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Br-82	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
C-11	Carbon (6)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
C-14	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ca-41	Calcium (20)	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Ca-45	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ca-47	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cd-109	Cadmium (48)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cd-113m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cd-115	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cd-115m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ce-139	Cerium (58)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ce-141	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ce-143	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ce-144 (b)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cf-248	Californium (98)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cf-249	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cf-250	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cf-251	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cf-252	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cf-253	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cf-254	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cl-36	Chlorine (17)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cl-38	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cm-240	Curium (96)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cm-241	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cm-242	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cm-243	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cm-244	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cm-245	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cm-246	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Cm-247	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cm-248	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Co-55	Cobalt (27)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Co-56	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Co-57	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Co-58	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Co-58m	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Co-60	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cr-51	Chromium (24)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Cs-129	Cesium (55)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-131	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cs-132	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-134	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cs-134m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-135	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Cs-136	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Cs-137 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Cu-64	Copper (29)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Cu-67	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Dy-159	Dysprosium (66)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Dy-165	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Dy-166	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Er-169	Erbium (68)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Er-171	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-147	Europium (63)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-148	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-149	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Eu-150 (short lived)	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-150 (long lived)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-152	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-152m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-154	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Eu-155	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Eu-156	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
F-18	Fluorine (9)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-52	Iron (26)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-55	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-59	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Fe-60	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ga-67	Gallium (31)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ga-68	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ga-72	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Gd-146	Gadolinium (64)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Gd-148	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Gd-153	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Gd-159	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ge-68	Germanium (32)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ge-71	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ge-77	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Hf-172	Hafnium (72)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hf-175	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hf-181	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hf-182	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-194	Mercury (80)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-195m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-197	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Hg-197m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Hg-203	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ho-166	Holmium (67)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ho-166m	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-123	Iodine (53)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
I-124	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-125	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-126	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-129	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
I-131	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>



Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
I-132	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
I-133	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
I-134	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
I-135	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-111	Indium (49)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-113m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-114m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
In-115m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ir-189	Iridium (77)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ir-190	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ir-192	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ir-194	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
K-40	Potassium (19)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
K-42	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
K-43	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Kr-81	Krypton (36)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Kr-85	-	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Kr-85m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>10</sup>	2.7X10 <sup>-1</sup>
Kr-87	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
La-137	Lanthanum (57)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
La-140	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Lu-172	Lutetium (71)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Lu-173	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Lu-174	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Lu-174m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Lu-177	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Mg-28	Magnesium (12)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Mn-52	Manganese (25)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Mn-53	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Mn-54	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Mn-56	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Mo-93	Molybdenum (42)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Mo-99	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
N-13	Nitrogen (7)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Na-22	Sodium (11)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Na-24	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Nb-93m	Niobium (41)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Nb-94	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nb-95	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nb-97	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nd-147	Neodymium (60)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Nd-149	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ni-59	Nickel (28)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ni-63	-	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ni-65	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Np-235	Neptunium (93)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Np-236 (short-lived)	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Np-236 (long-lived)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Np-237 (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Np-239	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Os-185	Osmium (76)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Os-191	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Os-191m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Os-193	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Os-194	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
P-32	Phosphorus (15)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
P-33	-	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Pa-230	Protactinium (91)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pa-231	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Pa-233	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pb-201	Lead (82)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pb-202	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pb-203	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pb-205	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pb-210 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pb-212 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Pd-103	Palladium (46)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Pd-107	-	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Pd-109	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-143	Promethium (61)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-144	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-145	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pm-147	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pm-148m	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-149	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pm-151	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Po-210	Polonium (84)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pr-142	Praseodymium (59)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Pr-143	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-188	Platinum (78)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-191	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-193	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pt-193m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pt-195m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-197	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pt-197m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Pu-236	Plutonium (94)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-237	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Pu-238	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-239	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-240	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Pu-241	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Pu-242	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Pu-244	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ra-223 (b)	Radium (88)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ra-224 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ra-225	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Ra-226 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Ra-228 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Rb-81	Rubidium (37)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rb-83	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rb-84	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rb-86	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Rb-87	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Rb (nat)	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Re-184	Rhenium (75)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re-184m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re-186	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re-187	-	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Re-188	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Re-189	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Re (nat)	-	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Rh-99	Rhodium (45)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rh-101	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Rh-102	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rh-102m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Rh-103m	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Rh-105	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Rn-222 (b)	Radon (86)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Ru-97	Ruthenium (44)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ru-103	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ru-105	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ru-106 (b)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
S-35	Sulphur (16)	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Sb-122	Antimony (51)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Sb-124	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sb-125	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sb-126	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sc-44	Scandium (21)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sc-46	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sc-47	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sc-48	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Se-75	Selenium (34)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Se-79	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Si-31	Silicon (14)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Si-32	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sm-145	Samarium (62)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Sm-147	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Sm-151	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Sm-153	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sn-113	Tin (50)	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Sn-117m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sn-119m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Sn-121m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Sn-123	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sn-125	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sn-126	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sr-82	Strontium (38)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sr-85	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sr-85m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Sr-87m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sr-89	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Sr-90 (b)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Sr-91	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Sr-92	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
T(H-3)	Tritium (1)	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Ta-178 (long-lived)	Tantalum (73)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Ta-179	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Ta-182	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Tb-157	Terbium (65)	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tb-158	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tb-160	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-95m	Technetium (43)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-96	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-96m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tc-97	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
Tc-97m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tc-98	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tc-99	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Tc-99m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-121	Tellurium (52)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-121m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Te-123m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-125m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-127	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-127m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Te-129	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-129m	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-131m	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Te-132	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Th-227	Thorium (90)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-228 (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-229 (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Th-230	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Th-231	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Th-232	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Th-234 (b)	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Th (nat) (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
Ti-44	Titanium (22)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Tl-200	Thallium (81)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tl-201	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tl-202	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tl-204	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Tm-167	Thulium (69)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tm-170	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Tm-171	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>8</sup>	2.7X10 <sup>-3</sup>
U-230 (fast lung absorption) (b), (d)	Uranium (92)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-230 (medium lung absorption) (e)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-230 (slow lung absorption) (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-232 (fast lung absorption) (b), (d)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
U-232 (medium lung absorption) (e)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-232 (slow lung absorption) (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-233 (fast lung absorption) (d)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-233 (medium lung absorption) (e)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-233 (slow lung absorption) (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-234 (fast lung absorption) (d)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-234 (medium lung absorption) (e)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-234 (slow lung absorption) (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-235 (all lung absorption types) (b), (d), (e), (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-236 (fast lung absorption) (d)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-236 (medium lung absorption) (e)	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
U-236 (slow lung absorption) (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U-238 (all lung absorption types) (b), (d), (e), (f)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
U (nat) (b)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
U (enriched to 20% or less) (g)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
U (dep)	-	1.0	2.7X10 <sup>-11</sup>	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>
V-48	Vanadium (23)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
V-49	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
W-178	Tungsten (74)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
W-181	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
W-185	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
W-187	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
W-188	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Xe-122	Xenon (54)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Xe-123	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>9</sup>	2.7X10 <sup>-2</sup>
Xe-127	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Xe-131m	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>
Xe-133	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Xe-135	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>10</sup>	2.7X10 <sup>-1</sup>
Y-87	Yttrium (39)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Y-88	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Y-90	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Y-91	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Y-91m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Y-92	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Y-93	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>
Yb-169	Ytterbium (70)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Yb-175	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Zn-65	Zinc (30)	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Zn-69	-	1.0X10 <sup>4</sup>	2.7X10 <sup>-7</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Zn-69m	-	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Zr-88	Zirconium (40)	1.0X10 <sup>2</sup>	2.7X10 <sup>-9</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Zr-93 (b)	-	1.0X10 <sup>3</sup>	2.7X10 <sup>-8</sup>	1.0X10 <sup>7</sup>	2.7X10 <sup>-4</sup>
Zr-95	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>6</sup>	2.7X10 <sup>-5</sup>
Zr-97 (b)	-	1.0X10 <sup>1</sup>	2.7X10 <sup>-10</sup>	1.0X10 <sup>5</sup>	2.7X10 <sup>-6</sup>

(a) (Reserved)

(b) Parent nuclides and their progeny included in secular equilibrium are listed in the following:

Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Cs-137	Ba-137m
Ce-134	La-134
Ce-144	Pr-144
Ba-140	La-140
Bi-212	Tl-208 (0.36), Po-212 (0.64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, Tl-208 (0.36), Po-212 (0.64)
Rn-220	Po-216
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Ra-228	Ac-228
Th-226	Ra-222, Rn-218, Po-214
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-nat	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214
U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
U-235	Th-231
U-238	Th-234, Pa-234m
U-nat	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
U-240	Np-240m
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

- (c) (Reserved)
- (d) These values apply only to compounds of uranium that take the chemical form of UF<sub>6</sub>, UO<sub>2</sub>F<sub>2</sub> and UO<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub> in both normal and accident conditions of transport.
- (e) These values apply only to compounds of uranium that take the chemical form of UO<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds in both normal and accident conditions of transport.
- (f) These values apply to all compounds of uranium other than those specified in notes (d) and (e) of this table.
- (g) These values apply to unirradiated uranium only.

Table A-3. General Values for A1 and A2

Contents	A <sub>1</sub>		A <sub>2</sub>		Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limits for exempt consignments (Bq)	Activity limits for exempt consignments (Ci)
	(TBq)	(Ci)	(TBq)	(Ci)				
Only beta or gamma emitting radionuclides are known to be present	1 x 10 <sup>-1</sup>	2.7 x 10 <sup>0</sup>	2 x 10 <sup>-2</sup>	5.4 x 10 <sup>-1</sup>	1 x 10 <sup>1</sup>	2.7 x 10 <sup>-10</sup>	1 x 10 <sup>4</sup>	2.7 x 10 <sup>-7</sup>
Only alpha emitting radionuclides are known to be present	2 x 10 <sup>-1</sup>	5.4 x 10 <sup>0</sup>	9 x 10 <sup>-5</sup>	2.4 x 10 <sup>-3</sup>	1 x 10 <sup>-1</sup>	2.7 x 10 <sup>-12</sup>	1 x 10 <sup>3</sup>	2.7 x 10 <sup>-8</sup>
No relevant data are available	1 x 10 <sup>-3</sup>	2.7 x 10 <sup>-2</sup>	9 x 10 <sup>-5</sup>	2.4 x 10 <sup>-3</sup>	1 x 10 <sup>-1</sup>	2.7 x 10 <sup>-12</sup>	1 x 10 <sup>3</sup>	2.7 x 10 <sup>-8</sup>

Table A-4. Activity-Mass Relationships for Uranium

Uranium Enrichment <sup>1</sup> wt % U-235 present	Specific Activity	
	TBq/g	Ci/g
0.45	1.8 x 10 <sup>-8</sup>	5.0 x 10 <sup>-7</sup>
0.72	2.6 x 10 <sup>-8</sup>	7.1 x 10 <sup>-7</sup>
1	2.8 x 10 <sup>-8</sup>	7.6 x 10 <sup>-7</sup>
1.5	3.7 x 10 <sup>-8</sup>	1.0 x 10 <sup>-6</sup>
5	1.0 x 10 <sup>-7</sup>	2.7 x 10 <sup>-6</sup>
10	1.8 x 10 <sup>-7</sup>	4.8 x 10 <sup>-6</sup>
20	3.7 x 10 <sup>-7</sup>	1.0 x 10 <sup>-5</sup>
35	7.4 x 10 <sup>-7</sup>	2.0 x 10 <sup>-5</sup>
50	9.3 x 10 <sup>-7</sup>	2.5 x 10 <sup>-5</sup>
90	2.2 x 10 <sup>-6</sup>	5.8 x 10 <sup>-5</sup>
93	2.6 x 10 <sup>-6</sup>	7.0 x 10 <sup>-5</sup>
95	3.4 x 10 <sup>-6</sup>	9.1 x 10 <sup>-5</sup>

<sup>1</sup> The figures for uranium include representative values for the activity of the uranium-234 that is concentrated during the enrichment process.

**REPEALER**

The following section of the Washington Administrative Code is repealed:

WAC 246-231-080 General license—DOT specification container.

**AMENDATORY SECTION** (Amending WSR 13-11-021, filed 5/7/13, effective 6/7/13)

**WAC 246-240-210 Training for use of unsealed radioactive material for which a written directive is required.** Except as provided in WAC 246-240-078, the licensee shall require an authorized user of unsealed radioactive material for the uses authorized under WAC 246-240-201 to be a physician who:

(1) Is certified by a medical specialty board whose certification process has been recognized by the department, NRC or an agreement state. (Specialty boards whose certification process has been recognized by NRC or an agreement state will be posted on NRC's web page at <http://www.nrc.gov/materials/miau/med-use-toolkit/spec-board-cert.html>.) To be recognized, a specialty board shall require all candidates for certification to:

(a) Successfully complete a residency training in a radiation therapy or nuclear medicine training program or a program in a related medical specialty that includes seven hundred hours of training and experience as described in subsection (2) of this section. Eligible training programs must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or Royal College of Physicians and Surgeons of Canada or the

Committee on Postgraduate Training of the American Osteopathic Association; and

(b) Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, quality assurance, and clinical use of unsealed by-product material(~~); and~~

~~(e) Obtain written attestation that the individual has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under WAC 246-240-201. The written attestation must be signed by a preceptor authorized user who meets the requirements in WAC 246-240-078, 246-240-210, or equivalent NRC or agreement state requirements. The preceptor authorized user, who meets the requirements in WAC 246-240-078 or 246-240-210 must have experience in administering dosages in the same dosage category or categories (i.e., this section) as the individual requesting authorized user status); or~~

(2) Has completed seven hundred hours of training and experience, including a minimum of two hundred hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material requiring a written directive. The training and experience must include:

(a) Classroom and laboratory training in the following areas:

- (i) Radiation physics and instrumentation;
- (ii) Radiation protection;
- (iii) Mathematics pertaining to the use and measurement of radioactivity;
- (iv) Chemistry of radioactive material for medical use; and
- (v) Radiation biology; and

(b) Work experience, under the supervision of an authorized user who meets the requirements in WAC 246-240-078, or subsection (1) or (2) of this section, or equivalent NRC or agreement state requirements. A supervising authorized user, who meets the requirements in this subsection, must also have experience in administering dosages in the same dosage category or categories (i.e., this section) as the individual requesting authorized user status. The work experience must involve:

- (i) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
- (ii) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
- (iii) Calculating, measuring, and safely preparing patient or human research subject dosages;
- (iv) Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;
- (v) Using procedures to contain spilled radioactive material safely and using proper decontamination procedures; and
- (vi) ~~((Eluting generator systems, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs; and~~
- ~~((vii))~~ Administering dosages of radioactive drugs to patients or human research subjects involving a minimum of three cases in each of the following categories for which the individual is requesting authorized user status:

(A) Oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131 for which a written directive is required;

(B) Oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131. Experience with at least three cases in this also satisfies the requirement in (b)~~((vii))~~ (vi)(A) of this subsection;

(C) Parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV for which a written directive is required; or

(D) Parenteral administration of any other radionuclide for which a written directive is required; and

(E) Has obtained written attestation that the individual has satisfactorily completed the requirements in subsection (1)(a) and (2)(b)~~((vii))~~ (vi) of this section, ~~((WAC 246-240-078,))~~ and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under WAC 246-240-201. The written attestation must be signed by a preceptor authorized user who meets the requirements in this section, WAC 246-240-078, or equivalent NRC or agreement state requirements. The preceptor authorized user, who meets the requirements in this subsection ~~((2))~~, must also have experience in administering dosages in the same dosage category or categories (i.e., this section) as the individual requesting authorized user status.

## WSR 14-02-075

### PROPOSED RULES

#### OFFICE OF

#### INSURANCE COMMISSIONER

[Insurance Commissioner Matter No. R 2013-24—Filed December 30, 2013, 12:03 p.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-21-141.

Title of Rule and Other Identifying Information: Requiring charitable gift annuity organizations to file their financial statements and related filings electronically and to file their gift annuity contract forms using system for electronic rate and form filing (SERFF).

Hearing Location(s): Insurance Commissioner's Office, 5000 Capitol Boulevard, TR 120, Tumwater, WA 98504-0255, on February 5, 2014, at 10:00 a.m.

Date of Intended Adoption: February 6, 2014.

Submit Written Comments to: Jim Tompkins, P.O. Box 40258, Olympia, WA 98504-025 [98504-0258], e-mail rulescoordinator@oic.wa.gov, fax (360) 586-3109, by January 24, 2014.

Assistance for Persons with Disabilities: Contact Lori [Lorie] Villaflores by January 24, 2014, TTY (360) 586-0241 or (360) 725-7087.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The proposed rule will require organizations that hold a certificate from the commissioner to issue charitable gift annuities to file their financial and related statements with the commissioner electronically rather than by paper. The proposed rule will also



require these organizations to file their gift annuity contracts electronically with the commissioner using SERFF.

Reasons Supporting Proposal: Charitable organizations that have received a certificate from the commissioner to issue charitable gift annuities must file an annual financial statement and related financial information with the commissioner. These organizations must also file their proposed charitable gift annuity contract forms with the commissioner for approval. These documents are currently filed with the commissioner using paper copies. The proposed rule will help reduce paper usage by using SERFF for filing of gift annuity contract forms and provide for better tracking of the approval of the contract forms and filing their financial and related statements with the commissioner electronically.

Statutory Authority for Adoption: RCW 48.38.075.

Statute Being Implemented: RCW 48.38.010 (9) and (10), and 48.38.030.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Mike Kreidler, insurance commissioner, governmental.

Name of Agency Personnel Responsible for Drafting: Jim Tompkins, P.O. Box 40258, Olympia, WA 98504-0258, (360) 725-7036; Implementation: Gayle Pasero (Financial Filings), P.O. Box 40259, Olympia, WA 98504-0259, (360) 725-7210 or Molly Nollette (SERFF Filings), P.O. Box 40255, Olympia, WA 98504-0255, (360) 725-7117; and Enforcement: Bill Michaels (Financial Filings), P.O. Box 40259, Olympia, WA 98504-0259, (360) 725-7214 or Molly Nollette (SERFF Filings), P.O. Box 40255, Olympia, WA 98504-0255, (360) 725-7117.

No small business economic impact statement has been prepared under chapter 19.85 RCW. The staff time cost of training needed to use SERFF combined with the cost of filing in the system is less than 0.3 percent of revenue for all affected domestic filers in Washington state. Therefore, under the provisions of RCW 19.85.030(1), no statement is needed because the cost of this proposed rule qualifies as a minor cost.

A cost-benefit analysis is required under RCW 34.05.-328. A preliminary cost-benefit analysis may be obtained by contacting Jim Tompkins, P.O. Box 40258, Olympia, WA 98504-0258, phone (360) 725-7036, fax (360) 586-3109, e-mail rulescoordinator@oic.wa.gov.

December 30, 2013  
Mike Kreidler  
Insurance Commissioner

## Chapter 284-38 WAC

### CHARITABLE GIFT ANNUITIES

#### NEW SECTION

**WAC 284-38-010 Definitions.** The definitions in this section apply throughout this chapter:

"Certificate holder" means any insurer or educational, religious, charitable, or scientific institution that has been issued a certificate of exemption by the commissioner to conduct a charitable gift annuity business.

"Complete filing" means a package of information containing charitable gift annuity contracts, supporting information, documents and exhibits submitted to the commissioner electronically using the system for electronic rate and form filing (SERFF).

"Contract" means a charitable gift annuity contract as described in chapter 48.38 RCW.

"Date filed" means the date a complete charitable gift annuity contract filing has been received and accepted by the commissioner.

"Filer" means a person, organization, or other entity that files charitable gift annuity contracts with the commissioner.

"Objection letter" means correspondence sent by the commissioner to the filer that:

(a) Requests clarification, documentation or other information;

(b) Explains errors or omissions in the filing; or

(c) Disapproves a charitable gift annuity contract under RCW 48.38.010(9), 48.18.110, 48.38.030, or 48.38.042.

"SERFF" means the system for electronic rate and form filing. SERFF is a proprietary National Association of Insurance Commissioners (NAIC) computer-based application that allows filers to create and submit rate, rule, and form filings electronically to the commissioner.

### FILING CHARITABLE GIFT ANNUITY CONTRACTS FORMS

#### NEW SECTION

**WAC 284-38-100 Filing instructions that are incorporated into this chapter.** SERFF is a dynamic application that the NAIC will revise and enhance over time. To be consistent with NAIC filing standards and provide timely instructions to filers, the commissioner must incorporate documents posted on the SERFF web site into this chapter. By reference, the commissioner incorporates these documents into this chapter:

(1) The *SERFF Industry Manual* available within the SERFF application; and

(2) The *Washington State SERFF Life and Disability Rate and Form Filing General Instructions* posted on the commissioner's web site, [www.insurance.wa.gov](http://www.insurance.wa.gov).

#### NEW SECTION

**WAC 284-38-110 General charitable gift annuity contract filing rules.** Filers and certificate holders must submit complete filings that comply with these rules:

(1) Filings must comply with the filing instructions and procedures in the *SERFF Industry Manual* available within the SERFF application and *Washington State SERFF Life and Disability Rate and Form Filing General Instructions*.

(2) Filers must submit every charitable gift annuity contract to the commissioner electronically using SERFF.

(a) Every charitable gift annuity contract filed in SERFF must be attached to the form schedule.

(b) All written correspondence related to a charitable gift annuity contract filing must be sent in SERFF.

(3) All filed contracts must be legible for both the commissioner's review and retention as a public record. Filers must submit new and replaced contracts to the commissioner for review in final printed form displayed in ten-point or larger type.

(4) Each contract must have a unique identifying number and a way to distinguish it from other editions of the same contract.

(5) Filers must submit a completed compliance checklist provided in the SERFF application with each new charitable gift annuity contract as supporting documentation. If the filing includes more than one new contract, the filer may:

(a) Complete a separate checklist for each charitable gift annuity contract; or

(b) Complete one checklist and submit an explanatory memorandum that lists any material differences between the filed contracts.

#### NEW SECTION

**WAC 284-38-120 Filing revised or replaced charitable gift annuity contracts forms.** If a revised or replaced charitable gift annuity contract form is being filed, in addition to the requirements of WAC 284-38-110, the filer must provide the following supporting documentation:

(1) If a contract is revised due to an objection(s) from the commissioner, the filer must provide a detailed explanation of all material changes to the disapproved contract.

(2) If a previously approved contract is replaced with a new version, the filer must submit an exhibit that marks and identifies each change or revision to the replaced contract using one of these methods:

(a) A draft contract that strikes through deletions and underlines additions or changes in the contract;

(b) A draft contract that includes comments in the margins explaining the changes in the contract; or

(c) A side-by-side comparison of current and proposed contract language.

#### NEW SECTION

**WAC 284-38-130 Filing authorization rules.** (1) A certificate holder may authorize a third party to file charitable gift annuity contracts on its behalf.

(2) If a certificate holder delegates filing authority to a third party, each filing must include a letter signed by an employee of the certificate holder authorizing the third party to make filings on behalf of the certificate holder. This subsection does not apply to a third party that is an affiliate or wholly owned subsidiary of the certificate holder.

(3) The certificate holder may not delegate responsibility for the content of a filing to a third party. The commissioner considers errors and omissions by the third party to be errors and omissions of the certificate holder.

(4) If a third party has a pattern of making filings that do not comply with this subpart, the commissioner may reject a delegation of filing authority from the certificate holder.

#### NEW SECTION

**WAC 284-38-140 The commissioner may reject annuity contract filings.** (1) The commissioner may reject and close any filing that does not comply with WAC 284-38-100. If the commissioner rejects a filing, the certificate holder has not filed the charitable gift annuity contract with the commissioner.

(2) If the commissioner rejects a filing and the filer resubmits it as a new filing, the date filed will be the date the commissioner receives and accepts the new filing.

#### NEW SECTION

**WAC 284-38-150 Responding to objection letters.** If the commissioner disapproves a filing under RCW 48.38.010 (9), 48.18.110, 48.38.030, or 48.38.042, the objection letter will state the reason(s) for disapproval, including relevant law and administrative rules. Filers must:

(1) Provide a complete response to an objection letter. A complete response includes:

(a) A separate response to each objection; and

(b) If appropriate, revised exhibits and supporting documentation.

(2) Respond to the commissioner in a timely manner.

### ANNUAL REPORTING REQUIREMENTS

#### NEW SECTION

**WAC 284-38-200 Annual reporting requirements.**

(1) Every certificate holder must electronically file with the commissioner a completed annual report within sixty days of its fiscal year end. A copy of the annual report form and instructions for completing and filing the annual report are available on the commissioner's web site at [www.insurance.wa.gov](http://www.insurance.wa.gov).

(2) As an ongoing statement of financial condition, required under RCW 48.38.010(10), the certificate holder must annually electronically file the following financial reports:

(a)(i) An audited financial statement specific to the certificate holder prepared in accordance with generally accepted accounting principles for the fiscal year immediately preceding; or

(ii) A consolidated audited financial statement prepared in accordance with generally accepted accounting principles for the fiscal year immediately preceding, which includes a supplemental schedule specific to the certificate holder. The audited financial statement must be filed within fifteen days of its release date following the certificate holder's fiscal year end.

(b) Unless permanently exempt in accordance with Internal Revenue Service regulations, file a complete public inspection copy of the certificate holder's IRS Form 990 within fifteen days of its filing with the IRS.

(c) Any other financial information required by the commissioner.

(3) The failure by a certificate holder to file an audited financial statement within nine months following its most recent fiscal year end, and when applicable its IRS Form 990

within fifteen days of its filing with the IRS, will constitute a finding as referenced under RCW 48.38.050 that the certificate holder failed to provide a satisfactory statement of financial condition as required under RCW 48.38.010(10). The finding may subject the certificate holder to disciplinary action as allowed under RCW 48.38.050.

(4) An encrypted or password protected filing or transmission is not considered filed under RCW 48.38.010(10) and this section.

(5) For purposes of determining whether a filing deadline has been met, a document is considered received if electronically submitted on or before the date it is due.

**WSR 14-02-103**  
**PROPOSED RULES**  
**OFFICE OF**  
**FINANCIAL MANAGEMENT**

[Filed December 31, 2013, 3:03 p.m.]

Original Notice.

Proposal is exempt under RCW 34.05.310(4) or 34.05.-330(1).

Title of Rule and Other Identifying Information: WAC 357-31-525 What is an employee entitled to under the Family and Medical Leave Act of 1993? and 357-31-530 Under the Family and Medical Leave Act of 1993, how is an eligible employee defined?

Hearing Location(s): Office of Financial Management (OFM), Capitol Court Building, 1110 Capitol Way South, Suite 120, Conference Room 110, Olympia, WA 98501, on February 13, 2014, at 8:30 a.m.

Date of Intended Adoption: February 20, 2014.

Submit Written Comments to: Kristie Wilson, OFM, P.O. Box 47500, e-mail Kristie.wilson@ofm.wa.gov, fax (360) 586-4694, by February 6, 2014. For OFM tracking purposes, please note on submitted comments "FORMAL COMMENT."

Assistance for Persons with Disabilities: Contact OFM by February 6, 2014, TTY (360) 753-4107 or (360) 586-8260.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: In January 2008 Congress passed the National Defense Authorization Act (NDAA) which added Family and Medical Leave Act coverage for Military Exigency Leave and Service Member Caregiver Leave. The Department of Labor (DOL), already in the process of revising their regulations, added these changes to new regulations which came out in January 2009. Then in October 2009, congress passed the 2010 NDAA which made further changes to Military Exigency Leave and Service Member Caregiver Leave. DOL's new regulations reflect the changes from the second act passed by congress. These changes were effective March 8, 2013. We are proposing the following rule changes to incorporate the new regulations that became effective March 8, 2013.

Statutory Authority for Adoption: Chapter 41.06 RCW.  
Statute Being Implemented: RCW 41.06.150.

Rule is not necessitated by federal law, federal or state court decision.

Name of Agency Personnel Responsible for Drafting: Kristie Wilson, 400 Insurance Building, (360) 902-0483.

No small business economic impact statement has been prepared under chapter 19.85 RCW.

A cost-benefit analysis is not required under RCW 34.05.328.

January 2, 2014  
[December 31, 2013]  
Roselyn Marcus  
Assistant Director for  
Legal and Legislative Affairs

AMENDATORY SECTION (Amending WSR 09-17-056 and 09-18-113, filed 8/13/09 and 9/2/09, effective 12/3/09)

**WAC 357-31-525 What is an employee entitled to under the Family and Medical Leave Act of 1993?** (1) The Family and Medical Leave Act (FMLA) of 1993 (29 U.S.C. 2601 et seq.) and its implementing rules, 29 C.F.R. Part 825, and additional amendments and subsequent regulations provide that an eligible employee must be granted, during a twelve-month period, a total of twelve work weeks of absence:

(a) As a result of the employee's serious health condition;  
(b) To care for an employee's parent, spouse, or minor/dependent child who has a serious health condition;

(c) For the birth of and to provide care to an employee's newborn, adopted or foster child as provided in WAC 357-31-460; and/or

(d) Due to a qualifying exigency (as described in the Family and Medical Leave Act of 1993 and its amendments (29 U.S.C. 2601 et seq.) and its implementing rules, 29 C.F.R. Part 825) arising from the fact that the employee's spouse, child of any age, or parent is on covered active duty or has been notified of pending call to covered active duty in the armed forces (~~(in support of a contingency operation)~~).

(i) (~~(This)~~) Subsection (1)(d) only applies if the spouse, child, or parent of the employee is a member of the National Guard (~~(or)~~) Reserves, (~~and certain retired members of the regular armed forces and retired reserves. This section does not apply if the spouse, child, or parent of the employee is a member of the regular armed forces on active duty~~) or regular armed forces.

(ii) (~~(This section)~~) Subsection (1)(d) only applies to federal calls to active duty and the deployment must be to a foreign country.

(2) An eligible employee who is the spouse, son, daughter, parent of a child of any age, or next of kin of a covered service member shall be entitled to a total of twenty-six work weeks of leave during a twelve-month period to care for the service member who is suffering from a serious illness or injury arising from injuries incurred in the line of duty. The leave described in this paragraph shall only be available during a single twelve-month period. This twelve-month period begins on the first day leave is taken pursuant to this subsection.

(a) For purposes of this section, "covered service member" is:

(i) A current member of the armed forces, including National Guard or Reserves, who is undergoing medical treatment, recuperation, or therapy, is otherwise in outpatient status, or is otherwise on the temporary disability retired list for a serious injury or illness; or

(ii) A covered veteran who is undergoing medical treatment, recuperation, or therapy, for a serious injury or illness. A covered veteran is one who was a member of the armed forces, including National Guard or Reserves, and was discharged or released under conditions other than dishonorable at any time during the five-year period prior to the first date the eligible employee takes FMLA leave to care for the covered veteran.

(b) For purposes of this section, "next of kin" with respect to an individual means the nearest blood relative of that individual other than the individual's spouse, parent, or child in the following order of priority:

(i) Blood relatives who have been granted legal custody of the service member;

(ii) Siblings;

(iii) Grandparents;

(iv) Aunts and uncles;

(v) Cousins;

(vi) The service member can designate another blood relative as the "nearest blood relative" and that designation takes precedent over the above list.

~~((b) For purposes of this section, "covered service member" is a member of the armed forces, including the National Guard or reserves, who is undergoing medical treatment, recuperation, or therapy, is otherwise in outpatient status, or is otherwise on a temporary disability retired list for a serious illness or injury.))~~

(c) For purposes of this section, "serious illness or injury" means ~~((an injury or illness incurred by the covered service member in the line of duty while on active duty in the armed forces that may render the service member medically unfit to perform the duties of the service member's office, grade, rank, or rating))~~.

(i) In the case of a current member of the armed forces, including a member of the National Guard or Reserves, an illness or injury incurred by the covered service member in the line of duty while on active duty in the armed forces or that existed before the beginning of the member's active duty and was aggravated by service in the line of duty while on active duty in the armed forces and that may render the member medically unfit to perform the duties of the member's office, grade, rank, or rating; and

(ii) In the case of a covered veteran an illness or injury that was incurred by the member in the line of duty while on active duty in the armed forces (or existed before the beginning of the member's active duty and was aggravated by service in the line of duty while on active duty in the armed forces) and manifested itself before or after the member became a veteran and meets one of the four criteria outlined in 29 C.F.R. 825.102.

(3) During the twelve-month period described in subsection (2) above, an eligible employee shall be entitled to a combined total of twenty-six work weeks of leave under subsections (1) and (2) above. Nothing in this section shall be

construed to limit the availability of leave under subsection (1) during any other twelve-month period.

(4) For general government employers, the twelve-month period in subsections (1) and (2) above is measured forward from the date the requesting employee begins leave under the Family and Medical Leave Act of 1993. The employee's next twelve-month period would begin the first time leave under the Family and Medical Leave Act is taken after completion of the previous twelve-month period. Higher education employers must define within their family and medical leave policy how the twelve months are measured. With respect to leave to care for a covered service member in subsection (2) of this section, higher education institutions must measure the twelve-month period forward from the day the leave begins regardless of what method is used for other FMLA purposes.

AMENDATORY SECTION (Amending WSR 11-19-091, filed 9/20/11, effective 10/24/11)

**WAC 357-31-530 Under the Family and Medical Leave Act of 1993, how is an eligible employee defined?** In accordance with 29 C.F.R. Part 825, an eligible employee is an employee who has worked for the state for at least twelve months and for at least one thousand two hundred fifty hours during the previous twelve-month period. Paid time off such as vacation leave, sick leave, temporary salary reduction leave, ((the)) personal holiday, compensatory time off, or shared leave and unpaid leave is not counted towards the one thousand two hundred and fifty hour eligibility requirement.

## WSR 14-02-105

### PROPOSED RULES

#### OFFICE OF

#### FINANCIAL MANAGEMENT

[Filed December 31, 2013, 3:09 p.m.]

Original Notice.

Proposal is exempt under RCW 34.05.310(4) or 34.05.-330(1).

Title of Rule and Other Identifying Information: WAC 357-58-125 What is an involuntary downward movement and how does that affect the salary?, 357-58-126 How is the employee affected when his/her position is involuntarily moved downward as described in WAC 357-58-125?, 357-19-225 How is an incumbent, whose position is converted from exempt to classified, placed within classified service?, 357-19-181 When is an employee appointed to a position with permanent status?, 357-01-303 Seniority date (general government), 357-01-304 Seniority date (higher education), 357-46-055 How is a general government employee's seniority date determined?, 357-58-132 Upon return from exempt service, how is a WMS employee's salary set?, 357-58-450 How does a WMS employee return from an exempt appointment?, and 357-58-226 What happens when a WMS employee who was serving a review period and was appointed to a WGS nonpermanent position returns to the same or different WMS position?

Hearing Location(s): Office of Financial Management (OFM), Capitol Court Building, 1110 Capitol Way South, Suite 120, Conference Room 110, Olympia, WA 98501, on February 13, 2014, at 8:30 a.m.

Date of Intended Adoption: February 20, 2014.

Submit Written Comments to: Kristie Wilson, OFM, P.O. Box 47500, e-mail [Kristie.wilson@ofm.wa.gov](mailto:Kristie.wilson@ofm.wa.gov), fax (360) 586-4694, by February 6, 2014. For OFM tracking purposes, please note on submitted comments "FORMAL COMMENT."

Assistance for Persons with Disabilities: Contact OFM by February 6, 2014, TTY (360) 753-4107 or (360) 586-8260.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: We have done a review of our Washington management service (WMS) rules and have determined the following rules require updating.

The proposed change to WAC 357-58-125 addresses salary setting when there is a downward reallocation (involuntary downward movement) of a WMS position. We are also proposing a new rule, WAC 357-58-126, to address how an employee is affected when his/her WMS position is involuntarily moved downward. These proposed changes are in line with the current Washington general service (WGS) rule.

WAC 357-19-225 and 357-19-181 addresses how an incumbent whose position is converted from exempt to classified is placed within classified service. Since WMS positions are classified, we are proposing adding language to WAC 357-19-225 and 357-19-181 to include WMS review period. We are also proposing removing the language in WAC 357-19-225 which says "date of hire into the position that is being converted to classified" and replacing it with references to the new proposed WAC 357-01-303 and 357-01-304 (seniority date). In addition we are proposing adding "including exempt service" to WAC 357-46-055.

Currently there is not a rule that addresses how salary is set when a WMS employee returns from an exempt appointment. We are proposing adding a new rule WAC 357-58-132 which says the employee's salary must not be less than the previous base salary adjusted according to any changes to the salary standard or general wage increases that occurred while the employee was in exempt service. A housekeeping change is being made to WAC 357-58-450 to include reference to the new rule WAC 357-58-132.

We are proposing adding a new rule WAC 357-58-226 which addresses what happens when a WMS employee who is serving a review period and was appointed to a WGS non-permanent position returns to the same or different WMS position.

Statutory Authority for Adoption: Chapter 41.06 RCW.

Statute Being Implemented: RCW 41.06.150.

Rule is not necessitated by federal law, federal or state court decision.

Name of Agency Personnel Responsible for Drafting: Kristie Wilson, 400 Insurance Building, (360) 902-0483.

No small business economic impact statement has been prepared under chapter 19.85 RCW.

A cost-benefit analysis is not required under RCW 34.05.328.

January 2, 2014

[December 31, 2013]

Roselyn Marcus  
Assistant Director for  
Legal and Legislative Affairs

#### NEW SECTION

**WAC 357-01-303 Seniority date (general government).** For a full-time general government employee, the seniority date is the employee's most recent date of hire into state service (including exempt service) as adjusted for any period of leave without pay which exceeds fifteen consecutive calendar days except when the leave without pay is taken for reasons listed in WAC 357-46-055.

For a part-time general government employee, the seniority date is calculated by determining the number of actual hours worked and/or in paid status, excluding compensatory time off. Actual hours worked includes overtime hours regardless of whether or not the employee receives monetary payment or compensatory time for the hours worked. Time spent in leave without pay status is not credited unless the leave without pay is taken for reasons listed in WAC 357-46-055.

#### NEW SECTION

**WAC 357-01-304 Seniority date (higher education).** For higher education employees, the seniority date is determined in accordance with the employer's layoff procedure. The employer's layoff procedure must specify a uniform method for determining the seniority date for employees of the higher education institution or related board who are covered by the civil service rules. Employees on military leave as provided in WAC 357-31-370 must not have their seniority date adjusted for the time spent on military leave without pay.

AMENDATORY SECTION (Amending WSR 05-19-009, filed 9/8/05, effective 10/10/05)

**WAC 357-19-181 When is an employee appointed to a position with permanent status?** An appointing authority must make a permanent status appointment of an employee under the following conditions:

(1) Upon successful completion of a probationary, trial service, or transition review period;

(2) Upon reassignment of a permanent employee who is not in trial service status;

(3) Upon transfer, demotion, reversion, or elevation when the employee is not required to serve a trial service period;

(4) Upon rehire from layoff or appointment to a position as a layoff option when a transition review period is not required;

(5) Upon the director conferring permanent status to an employee under remedial action provisions; and

(6) Upon conversion of an exempt position to the classified service, per WAC 357-19-225, if the incumbent has been employed for at least an amount of time equal to the probationary period or WMS review period for the class. If the incumbent has not been employed that long, the employee

must serve a probationary period or WMS review period. The employer may count the time spent in the position prior to conversion towards the probationary period or WMS review period.

AMENDATORY SECTION (Amending WSR 05-01-206, filed 12/21/04, effective 7/1/05)

**WAC 357-19-225 How is an incumbent, whose position is converted from exempt to classified, placed within classified service?** An incumbent whose position is converted from exempt to classified service may be placed within the classified service as follows:

(1) If the incumbent has been continuously employed for a period of time equivalent to or greater than the probationary period or WMS review period established for the classified position, the incumbent will have permanent status and does not serve a probationary period or WMS review period. If the incumbent has been employed for less than the duration of the probationary period or WMS review period, WAC 357-19-020 (~~applies~~) and 357-58-285 apply.

(2) The incumbent is not required to pass a qualifying examination.

(3) Salary is set in accordance with WAC 357-28-165.

(4) The incumbent is credited with unused accrued sick leave at the time of conversion and continues to accrue sick leave as provided in chapter 357-31 WAC (Leave and holidays chapter).

(5) The incumbent is credited with unused accrued vacation leave at the time of conversion and accrues vacation leave at the same rate as for classified employees as provided in chapter 357-31 WAC.

(6) Seniority is established (~~using the date of hire into the position that is being converted to classified service~~) in accordance with WAC 357-01-303 and 357-01-304.

AMENDATORY SECTION (Amending WSR 09-11-063, filed 5/14/09, effective 6/16/09)

**WAC 357-46-055 How is a general government employee's seniority date determined?** (1) For a full-time general government employee, the seniority date is the employee's most recent date of hire into state service (including exempt service) as adjusted for any period of leave without pay which exceeds fifteen consecutive calendar days except when the leave without pay is taken for:

(a) Military leave as provided in WAC 357-31-370;

(b) Compensable work-related injury or illness leave;

(c) Government service leave not to exceed two years and one month;

(d) Educational leave, contingent upon successful completion of the coursework; and/or

(e) Reducing the effects of layoff.

(f) When an employee is on leave without pay for more than fifteen consecutive calendar days and the absence is not due to one of the reasons listed above, the employee's seniority date must be moved forward in an amount equal to the number of calendar days on leave without pay.

(2) For a part-time general government employee, the seniority date is calculated by determining the number of actual hours worked and/or in paid status, excluding compen-

satory time off. Actual hours worked includes overtime hours regardless of whether or not the employee receives monetary payment or compensatory time for the hours worked. Time spent in leave without pay status is not credited unless the leave without pay is taken for:

(a) Military leave as provided in WAC 357-31-370;

(b) Compensable work-related injury or illness leave;

(c) Government service leave not to exceed two years and one month;

(d) Educational leave, contingent upon successful completion of the coursework; and/or

(e) Reducing the effects of layoff.

AMENDATORY SECTION (Amending WSR 05-12-069, filed 5/27/05, effective 7/1/05)

**WAC 357-58-125 What is an involuntary downward movement and how does that affect the salary?** An involuntary downward movement is based on a nondisciplinary reassignment of duties that results in a lower salary standard and/or lower evaluation points for an employee's current position. (~~Such downward movement will not decrease the employee's current salary. The employee's current salary will be retained until such time as the WMS management band maximum exceeds the employee's salary or the employee leaves the position.~~) A WMS employee occupying a position that is effected by an involuntary downward movement must be placed within the salary standard established for the WMS position at an amount equal to his/her previous base salary. If the previous base salary exceeds the new salary standard, the employee's base salary must be set equal to the maximum of the salary standard for the position. The employee's base salary may be set higher than the salary standard maximum, but not exceeding the previous base salary, if allowed by the employer's salary determination policy.

#### NEW SECTION

**WAC 357-58-126 How is the employee affected when his/her position is involuntarily moved downward as described in WAC 357-58-125?** (1) If the employee meets the position requirements and chooses to remain in the position the employee retains appointment status and his/her salary is set in accordance with WAC 357-58-125.

(2) If the employee chooses to vacate the position or does not meet the position requirements, the employer's WMS layoff procedure applies.

#### NEW SECTION

**WAC 357-58-132 Upon return from exempt service, how is a WMS employee's salary set?** The employee's base salary must not be less than the employee's previous base salary in classified service, adjusted according to any changes to the salary standard established for the position or any general wage increases/adjustments that occurred while the employee was in exempt service.

NEW SECTION

**WAC 357-58-226 What happens when a WMS employee who was serving a review period and was appointed to a WGS nonpermanent position returns to the same or different WMS position?** If a WMS employee was serving a review period and accepted a nonpermanent appointment to a WGS position and returned to the same or different WMS position, the employer may allow the prior time served in the WMS review period to count towards the completion of the review period.

AMENDATORY SECTION (Amending WSR 05-12-071, filed 5/27/05, effective 7/1/05)

**WAC 357-58-450 How does a WMS employee return from an exempt appointment((s))?** When an exempt employee has the right to return under WAC 357-04-030 to a WMS position the return will be accomplished as provided in WAC 357-19-195 (~~and~~), 357-19-200, and 357-58-132.

**WSR 14-02-123**  
**PROPOSED RULES**  
**DEPARTMENT OF**  
**FISH AND WILDLIFE**  
 [Filed January 2, 2014, 10:23 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-20-126 on October 2, 2013.

Title of Rule and Other Identifying Information: WAC 220-56-350 Clams other than razor clams, mussels—Areas and seasons and 220-56-380 Oysters—Areas and seasons.

Hearing Location(s): Natural Resources Building, Room 172, 1111 Washington Street S.E., Olympia, WA 98504, on February 7-8, 2014, at 8:30 a.m.

Date of Intended Adoption: March 7, 2014.

Submit Written Comments to: Joanna Eide, Rules Coordinator, 600 Capitol Way North, Olympia, WA 98501-1091, e-mail [Joanna.Eide@dfw.wa.gov](mailto:Joanna.Eide@dfw.wa.gov), fax (360) 902-2155, by January 31, 2014.

Assistance for Persons with Disabilities: Contact Tami Linger by January 24, 2014, TTY (360) 902-2207 or (360) 902-2267.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: An analysis of clam and oyster survey data, sport harvest projections, and negotiations affecting intertidal treaty and nontreaty fisheries allows for recreational clam and oyster seasons to be opened or extended on some public beaches and requires some beaches to be closed or the seasons shortened. This rule-making proposal reflects those openings and closures.

Reasons Supporting Proposal: These amendments will perpetuate shellfish resources while maximizing recreational fishing opportunity and protecting public health.

Statutory Authority for Adoption: RCW 77.04.012, 77.04.013, 77.04.055, and 77.12.047.

Statute Being Implemented: RCW 77.04.012, 77.04.013, 77.04.055, and 77.12.047.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Washington department of fish and wildlife, governmental.

Name of Agency Personnel Responsible for Drafting: Richard Childers, 375 Hudson Street, Port Townsend, WA 98368, (360) 302-3030; Implementation: James Scott, 1111 Washington Street S.E., Olympia, WA 98504, (360) 902-2736; and Enforcement: Chief Steve Crown, 1111 Washington Street S.E., Olympia, WA 98504, (360) 902-2373.

No small business economic impact statement has been prepared under chapter 19.85 RCW. This rule change proposal only affects recreational shellfishers; no small businesses are affected.

A cost-benefit analysis is not required under RCW 34.05.328. This proposal does not involve hydraulics.

January 2, 2014  
 Joanna M. Eide  
 Rules Coordinator

AMENDATORY SECTION (Amending WSR 13-06-034, filed 3/1/13, effective 4/1/13)

**WAC 220-56-350 Clams other than razor clams, mussels—Areas and seasons.** (~~A person can~~) It is permissible to take, dig for, and possess clams and mussels for personal use on Puget Sound (~~the entire year~~) year-round, except (~~from~~) the following restrictions apply to the public tidelands at the beaches listed below(~~, which are closed unless otherwise provided~~):

- (1) Ala Spit: Open May 1 through May 31 only.
- (2) Alki Park: Closed (~~the entire year~~) year-round.
- (3) Alki Point: Closed (~~the entire year~~) year-round.
- (4) Bay View State Park: Closed (~~the entire year~~) year-round.
- (5) Belfair State Park: Open (~~April 1 through April 30~~) January 1 through August 31 only.
- (6) Brown's Point Lighthouse: Closed (~~the entire year~~) year-round.
- (7) Cama Beach State Park: Closed (~~the entire year~~) year-round.
- (8) Camano Island State Park: Closed (~~the entire year~~) year-round.
- (9) Chuckanut Bay: Closed (~~the entire year~~) year-round.
- (10) Coupeville: Closed (~~the entire year~~) year-round.
- (11) (~~Dash Point State Park: Closed the entire year.~~)
- (~~12~~) Dave Mackie County Park: Closed (~~the entire year~~) year-round.
- (~~(13)~~) (12) Des Moines City Park: Closed (~~the entire year~~) year-round.
- (~~(14)~~) (13) Discovery Park: Closed (~~the entire year~~) year-round.
- (~~(15) DNR-79: Closed the entire year.~~)
- (~~16~~) (14) DNR-142: Closed (~~the entire year~~) year-round.
- (~~(17)~~) (15) DNR-144 (Sleeper): Closed (~~the entire year~~) year-round.
- (~~(18)~~) (16) Dockton County Park: Closed (~~the entire year~~) year-round.

~~((19))~~ (17) Dosewallips State Park: Closed, except open (~~(April)~~) March 1 through (~~(August)) July 15 only in the area defined by boundary markers and signs posted on the beach.~~

~~((20))~~ (18) Dungeness Spit and Dungeness National Wildlife Refuge Tidelands(~~(—)~~): Open May 15 through September 30 only.

~~((21))~~ (19) Eagle Creek: Open July 1 through July 31 only.

~~((22))~~ (20) East San de Fuca: Closed (~~(the entire year)~~) year-round east of the Rolling Hills Glencairn Community dock.

~~((23))~~ (21) Fay Bainbridge Park: Closed year-round.

(22) Fort Flagler State Park including that portion of the spit west of the park boundary (Rat Island): Open (~~(May 15 through October 31)) January 1 through April 15 and May 15 through December 31 only.~~

~~((24))~~ Fort Ward State Park: Closed the entire year.

~~((25))~~ (23) Freeland County Park: Closed (~~(the entire year)~~) year-round.

~~((26))~~ (24) Frye Cove County Park: Open January 1 through May 15 only.

~~((27))~~ (25) Garrison Bay: The tidelands at Guss Island and those tidelands at British camp between the National Park Service dinghy dock at the north end and the park boundary at the south end are closed (~~(the entire year)~~) year-round.

~~((28))~~ (26) Gertrude Island(~~(—)~~): All tidelands at Gertrude Island are closed (~~(the entire year)~~) year-round.

~~((29))~~ (27) Golden Gardens: Closed (~~(the entire year)~~) year-round.

~~((30))~~ (28) Graveyard Spit: Closed (~~(the entire year)~~) year-round.

~~((31))~~ (29) Harrington Beach: Closed (~~(the entire year)~~) year-round.

~~((32))~~ (30) Hoodspout: Tidelands at Hoodspout Salmon Hatchery are closed (~~(the entire year)~~) year-round.

~~((33))~~ (31) Hope Island State Park (South Puget Sound): Open May 1 through May 31 only.

~~((34))~~ (32) Howarth Park: Closed (~~(the entire year)~~) year-round.

~~((35))~~ (33) Illahee State Park: Open April 1 through July 31 only.

~~((36))~~ (34) Kayak Point County Park: Closed (~~(the entire year)~~) year-round.

~~((37))~~ (35) Kitsap Memorial State Park: Closed (~~(the entire year)~~) year-round.

~~((38))~~ (36) Kopachuck State Park: Open June 1 through July 31 only.

~~((39))~~ (37) Liberty Bay(~~(—)~~): All state-owned tidelands in Liberty Bay north and west of the Keyport Naval Supply Center are closed (~~(to the harvest of clams the entire year)~~) year-round.

~~((40))~~ (38) Lincoln Park: Closed (~~(the entire year)~~) year-round.

~~((41))~~ (39) Lions Park (Bremerton): Closed (~~(the entire year)~~) year-round.

~~((42))~~ (40) Little Clam Bay: Closed (~~(the entire year)~~) year-round.

~~((43))~~ (41) Lower Roto Vista Park: Closed (~~(the entire year)~~) year-round.

~~((44))~~ (42) Manchester State Park: Closed (~~(the entire year)~~) year-round.

~~((45))~~ (43) McNeil Island(~~(—)~~): All tidelands on McNeil Island are closed (~~(the entire year)~~) year-round.

~~((46))~~ (44) Meadowdale County Park: Closed (~~(the entire year)~~) year-round.

~~((47))~~ (45) Mee-Kwa-Mooks Park: Closed (~~(the entire year)~~) year-round.

~~((48))~~ (46) Monroe Landing: Closed (~~(the entire year)~~) year-round.

~~((49))~~ (47) Mukilteo State Park(~~(—)~~): Closed (~~(the entire year)~~) year-round.

~~((50))~~ (48) Mystery Bay State Park: Open October 1 through April 30 only.

~~((51))~~ (49) Nisqually National Wildlife Refuge: Closed (~~(the entire year)~~) year-round.

~~((52))~~ (50) North Beach County Park: Closed (~~(the entire year)~~) year-round.

~~((53))~~ (51) North Fort Lewis: Closed (~~(the entire year)~~) year-round.

~~((54))~~ (52) North Point Hudson: Closed (~~(the entire year)~~) year-round.

~~((55))~~ (53) Northeast Cultus Bay: Closed (~~(the entire year)~~) year-round.

~~((56))~~ (54) Oak Bay County Park: Open April 1 through (~~(July 31)) June 30 only.~~

~~((57))~~ (55) Oak Harbor City Park: Closed (~~(the entire year)~~) year-round.

~~((58))~~ (56) Old Man House State Park: Closed (~~(the entire year)~~) year-round.

~~((59))~~ (57) Olympia Shoal: Closed (~~(the entire year)~~) year-round.

~~((60))~~ (58) Oyster Reserves: Puget Sound and Willapa Bay state oyster reserves are closed (~~(the entire year)~~) year-round except as follows:

(a) North Bay: State-owned oyster reserves are open (~~(April)) June 1 through (~~(September 15)) June 30 and August 1 through August 31 only.~~~~

(b) Oakland Bay: State-owned oyster reserves open (~~(the entire year)~~) year-round except in areas defined by boundary markers and signs posted on the beach.

(c) Willapa Bay - Long Island oyster reserve: Northwest side of Long Island between reserve monuments 39 and 41 and southwest side of Long Island between reserve monuments 58 and 59 are open year-round.

~~((61))~~ (59) Penrose Point State Park: Open March 1 through May 15 only.

~~((62))~~ (60) Picnic Point County Park: Closed (~~(the entire year)~~) year-round.

~~((63))~~ (61) Pitship Point: Closed (~~(the entire year)~~) year-round.

~~((64))~~ (62) Pitt Island(~~(—)~~): All tidelands on Pitt Island are closed (~~(the entire year)~~) year-round.

~~((65))~~ (63) Pleasant Harbor State Park: Closed (~~(the entire year)~~) year-round.

~~((66))~~ (64) Point Defiance: Closed (~~(the entire year)~~) year-round.



~~((67))~~ (65) Point Whitney (excluding Point Whitney Lagoon): ~~((Open March 15 through March 31))~~ Closed year-round.

~~((68))~~ (66) Point Whitney Lagoon: Open ~~((April))~~ January 1 through ((April 30)) March 15 only.

~~((69))~~ (67) Port Angeles Coast Guard: Closed ~~((the entire year))~~ year-round.

~~((70))~~ (68) Port Angeles Harbor: Closed ~~((the entire year))~~ year-round.

~~((71))~~ (69) Port Gardner: Closed ~~((the entire year))~~ year-round.

~~((72))~~ (70) Port Townsend Ship Canal/Portage Canal: Open January 1 through ~~((June 30))~~ July 31 only.

~~((73))~~ (71) Post Point: Closed ~~((the entire year))~~ year-round.

~~((74))~~ (72) Potlatch DNR tidelands: Open ~~((April))~~ July 1 through ((June 30)) August 31 only.

~~((75))~~ (73) Potlatch State Park: Open ~~((April))~~ July 1 through ((June 30)) August 31 only.

~~((76))~~ (74) Priest Point County Park: Closed ~~((the entire year))~~ year-round.

~~((77))~~ (75) Purdy Spit County Park: The southern shore of the spit from the boat ramp ~~((to the bridge is closed the entire year))~~ east to the southern utility tower near Purdy Bridge is open August 1 through August 31 only.

~~((78))~~ (76) Quilcene Bay Tidelands~~((--))~~: All state-owned tidelands in Quilcene Bay north of a line drawn from the Quilcene Boat Haven to Fisherman's Point are closed to the harvest of clams ~~((the entire year))~~ year-round, except those state-owned tidelands on the west side of the bay north of the Quilcene Boat Haven are open April 1 through December 31, daily from official sunrise to official sunset only.

~~((79))~~ (77) Reid Harbor - South Beach: Closed ~~((the entire year))~~ year-round.

~~((80))~~ (78) Retsil: Closed ~~((the entire year))~~ year-round.

~~((81))~~ (79) Richmond Beach Saltwater Park: Closed ~~((the entire year))~~ year-round.

~~((82))~~ (80) Saltwater State Park: Closed ~~((the entire year))~~ year-round.

~~((83))~~ (81) Samish Beach: Closed ~~((the entire year))~~ year-round.

~~((84))~~ (82) Scenic Beach State Park: Closed ~~((the entire year))~~ year-round.

~~((85))~~ (83) Seahurst County Park: Closed ~~((the entire year))~~ year-round.

~~((86))~~ (84) Semiahmoo: Closed ~~((the entire year))~~ year-round.

~~((87))~~ (85) Semiahmoo County Park: Closed ~~((the entire year))~~ year-round.

~~((88))~~ (86) Sequim Bay State Park~~((--))~~: Open ~~((May))~~ April 1 through June 30 only.

~~((89))~~ (87) Shine Tidelands State Park: Open January 1 through May 15 only.

~~((90))~~ (88) Silverdale Waterfront Park: Closed ~~((the entire year))~~ year-round.

~~((91))~~ (89) Sinclair Inlet: Closed ~~((the entire year))~~ year-round.

~~((92))~~ (90) Skagit Wildlife Area: Closed ~~((the entire year))~~ year-round.

~~((93))~~ (91) South Carkeek Park: Closed ~~((the entire year))~~ year-round.

~~((94))~~ (92) South Gordon Point: Closed ~~((the entire year))~~ year-round.

~~((95))~~ (93) South Indian Island County Park: Open ~~((April))~~ July 1 through ((June)) September 15 only.

~~((96))~~ (94) South Mukilteo Park: Closed ~~((the entire year))~~ year-round.

~~((97))~~ (95) South Oro Bay: Closed ~~((the entire year))~~ year-round.

~~((98))~~ (96) South Point Wilson (Port Townsend): Closed ~~((the entire year))~~ year-round.

~~((99))~~ (97) Southworth Ferry Dock: Closed ~~((the entire year))~~ year-round.

~~((100))~~ (98) Spencer Spit State Park: Open March 1 through July 31 only.

~~((101))~~ Suquamish (Old Man House): Closed ~~the entire year.~~

~~((102))~~ (99) Taylor Bay: Closed ~~((the entire year))~~ year-round.

~~((103))~~ (100) Triton Cove Tidelands: Open July ~~((+))~~ 15 through August 31 only.

~~((104))~~ (101) Twanoh State Park: Open ~~((August))~~ May 1 through May 15 and September 1 through September ~~((+5))~~ 30 only.

~~((105))~~ (102) Walker County Park: Closed ~~((the entire year))~~ year-round.

~~((106))~~ (103) West Dewatto: DNR Beach 44A open July 1 through September 30 only.

~~((107))~~ (104) West Pass Access: Closed ~~((the entire year))~~ year-round.

~~((108))~~ (105) Willapa Bay: State-owned tidelands east of the department Willapa Bay Field Station and Nahcotta Tidelands Interpretive Site are closed year-round.

~~((109))~~ (106) Wolfe Property State Park: Open January 1 through May 15 only.

~~((110))~~ (107) Woodard Bay: Closed ~~((the entire year))~~ year-round.

~~((A person can))~~ It is permissible to take, dig for, and possess clams, cockles, borers, and mussels, not including razor clams, for personal use in Grays Harbor and Willapa Harbor ~~((the entire year))~~ year-round, except from state oyster reserves, which are closed to clam digging ~~((the entire year))~~ year-round.

~~((A person can))~~ It is permissible to take, dig for, and possess clams, cockles, borers, and mussels, not including razor clams, for personal use from the Pacific Ocean beaches from November 1 through March 31 only.

**AMENDATORY SECTION** (Amending WSR 13-06-034, filed 3/1/13, effective 4/1/13)

**WAC 220-56-380 Oysters—Areas and seasons.** ~~((A person can))~~ It is permissible to take and possess oysters for personal use from public tidelands ~~((the entire year))~~ year-round except ~~((from))~~ the following restrictions apply to the public tidelands at the beaches listed below ~~((, which are closed unless otherwise provided:))~~:

(1) Ala Spit: Open May 1 through May 31 only.

(2) Alki Park: Closed ~~((the entire year))~~ year-round.

(3) Alki Point: Closed ~~((the entire year))~~ year-round.  
 (4) Bangor: Closed ~~((the entire year))~~ year-round.  
 (5) Bay View State Park: Closed ~~((the entire year))~~ year-round.  
 (6) Brown's Point Lighthouse: Closed ~~((the entire year))~~ year-round.  
 (7) Cama Beach State Park: Closed ~~((the entire year))~~ year-round.  
 (8) Camano Island State Park: Closed ~~((the entire year))~~ year-round.  
 (9) Chuckanut: Closed ~~((the entire year))~~ year-round.  
 (10) Coupeville: Closed ~~((the entire year))~~ year-round.  
 (11) ~~((Dash Point State Park: Closed the entire year-~~  
 (12)) Dave Mackie County Park: Closed ~~((the entire year))~~ year-round.  
 ((13)) (12) Des Moines City Park: Closed ~~((the entire year))~~ year-round.  
 ((14)) (13) Discovery Park: Closed ~~((the entire year))~~ year-round.  
 ((15)) ~~DNR-79: Closed the entire year-~~  
 (16)) (14) DNR-142: Closed ~~((the entire year))~~ year-round.  
 ((17)) (15) DNR 144 (Sleeper): Closed ~~((the entire year))~~ year-round.  
 ((18)) (16) Dockton County Park: Closed ~~((the entire year))~~ year-round.  
 ((19)) (17) Dungeness Spit/National Wildlife Refuge: Open May 15~~(-)~~ through September 30 only.  
 ((20)) (18) East San de Fuca: Closed ~~((the entire year))~~ year-round east of the Rolling Hills Glencairn Community dock.  
 ((21)) (19) Fay Bainbridge Park: Closed year-round.  
 (20) Fort Flagler State Park including that portion of the spit west of the park boundary (Rat Island): Open ~~((May))~~ January 1 through April 15 and May 15 through ((October)) December 31 only.  
 ((22)) ~~Fort Ward State Park: Closed the entire year-~~  
 (23)) (21) Freeland County Park: Closed ~~((the entire year))~~ year-round.  
 ((24)) (22) Frye Cove County Park: Open January 1 through May 15 only.  
 ((25)) (23) Golden Gardens: Closed ~~((the entire year))~~ year-round.  
 ((26)) (24) Graveyard Spit: Closed ~~((the entire year))~~ year-round.  
 ((27)) (25) Harrington Beach: Closed ~~((the entire year))~~ year-round.  
 ((28)) (26) Hoodspout: Tidelands at the Hoodspout Salmon Hatchery are closed ~~((the entire year))~~ year-round.  
 ((29)) (27) Hope Island State Park (South Puget Sound): Open May 1 through May 31 only.  
 ((30)) (28) Howarth Park: Closed ~~((the entire year))~~ year-round.  
 ((31)) (29) Illahee State Park: Open April 1 through July 31 only.  
 ((32)) (30) Kayak Point County Park: Closed ~~((the entire year))~~ year-round.  
 ((33)) (31) Kitsap Memorial State Park: Closed ~~((the entire year))~~ year-round.

~~((34))~~ (32) Kopachuck State Park: Open March 1 through July 31 only.  
~~((35))~~ (33) Liberty Bay~~(-)~~: All state-owned tidelands in Liberty Bay north and west of the Keyport Naval Supply Center are closed ~~((to the harvest of oysters the entire year))~~ year-round.  
~~((36))~~ (34) Lincoln Park: Closed ~~((the entire year))~~ year-round.  
~~((37))~~ (35) Lions Park (Bremerton): Closed ~~((the entire year))~~ year-round.  
~~((38))~~ (36) Little Clam Bay: Closed ~~((the entire year))~~ year-round.  
~~((39))~~ (37) Lower Roto Vista Park: Closed ~~((the entire year))~~ year-round.  
~~((40))~~ (38) Manchester State Park: Closed ~~((the entire year))~~ year-round.  
~~((41))~~ (39) Meadowdale County Park: Closed ~~((the entire year))~~ year-round.  
~~((42))~~ (40) Mee-Kwa-Mooks Park: Closed ~~((the entire year))~~ year-round.  
~~((43))~~ (41) Monroe Landing: Closed ~~((the entire year))~~ year-round.  
~~((44))~~ (42) Mukilteo State Park: Closed ~~((the entire year))~~ year-round.  
~~((45))~~ (43) Mystery Bay State Park: Open October 1 through April 30 only.  
~~((46))~~ (44) Nisqually National Wildlife Refuge: Closed ~~((the entire year))~~ year-round.  
~~((47))~~ (45) North Beach County Park: Closed ~~((the entire year))~~ year-round.  
~~((48))~~ (46) North Fort Lewis: Closed ~~((the entire year))~~ year-round.  
~~((49))~~ (47) North Point Hudson: Closed ~~((the entire year))~~ year-round.  
~~((50))~~ (48) Northeast Cultus Bay: Closed ~~((the entire year))~~ year-round.  
~~((51))~~ (49) Oak Bay County Park: Open April 1 through ~~((July 31))~~ June 30 only.  
~~((52))~~ (50) Oak Harbor Beach Park: Closed ~~((the entire year))~~ year-round.  
~~((53))~~ (51) Oak Harbor City Park: Closed ~~((the entire year))~~ year-round.  
~~((54))~~ (52) Old Man House State Park: Closed ~~((the entire year))~~ year-round.  
~~((55))~~ (53) Olympia Shoal: Closed ~~((the entire year))~~ year-round.  
~~((56))~~ (54) Oyster Reserves: Puget Sound and Willapa Bay oyster reserves are closed ~~((the entire year))~~ year-round except the following are open ~~((the entire year))~~ during the dates specified:  
 (a) Oakland Bay~~(-)~~: State-owned oyster reserves are open ~~((the entire year))~~ year-round except in areas defined by boundary markers and signs posted on the beach.  
 (b) North Bay~~(-)~~: State-owned reserves are open ~~((April))~~ June 1 through ((September 15)) June 30 and August 1 through August 31 only.  
 (c) Willapa Bay - Long Island oyster reserve: Northwest side of Long Island between reserve monuments 39 and 41 and southwest side of Long Island between reserve monuments 58 and 59 are open year-round.

~~((57))~~ (55) Penrose Point State Park: Open March 1 through May 15 only.

~~((58))~~ (56) Picnic Point: Closed ~~((the entire year))~~ year-round.

~~((59))~~ (57) Pitt Island: Closed ~~((the entire year))~~ year-round.

~~((60))~~ (58) Pleasant Harbor State Park: Closed ~~((the entire year))~~ year-round.

~~((61))~~ (59) Point Defiance: Closed ~~((the entire year))~~ year-round.

~~((62))~~ (60) Point Whitney tidelands (excluding Point Whitney Lagoon): Open January 1 through June 30 only.

~~((63))~~ (61) Port Angeles Coast Guard: Closed ~~((the entire year))~~ year-round.

~~((64))~~ (62) Port Angeles Harbor: Closed ~~((the entire year))~~ year-round.

~~((65))~~ (63) Port Gardner: Closed ~~((the entire year))~~ year-round.

~~((66))~~ (64) Port Townsend Ship Canal/Portage Canal: Open January 1 through ~~((June 30))~~ July 31 only.

~~((67))~~ (65) Post Point: Closed ~~((the entire year))~~ year-round.

~~((68))~~ (66) Potlatch DNR Tidelands: Open ~~((April))~~ July 1 through ~~((June 30))~~ August 31 only.

~~((69))~~ (67) Potlatch State Park: Open ~~((April))~~ July 1 through ~~((June 30))~~ August 31 only.

~~((70))~~ (68) Priest Point County Park: Closed ~~((the entire year))~~ year-round.

~~((71))~~ (69) Purdy Spit County Park: The southern shore of the spit from the boat ramp ~~((to the bridge is closed the entire year))~~ east to the southern utility tower near Purdy Bridge is open August 1 through August 31 only.

~~((72))~~ (70) Quilcene Bay Tidelands~~((---))~~: All state-owned tidelands in Quilcene Bay north of a line drawn from the Quilcene Boat Haven to Fisherman's Point are closed year-round except those state-owned tidelands on the west side of the bay north of the Quilcene Boat Haven are open April 1 through December 31, daily from official sunrise to official sunset, only.

~~((73))~~ (71) Reid Harbor - South Beach: Closed ~~((the entire year))~~ year-round.

~~((74))~~ (72) Retsil: Closed ~~((the entire year))~~ year-round.

~~((75))~~ (73) Richmond Beach Saltwater Park: Closed ~~((the entire year))~~ year-round.

~~((76))~~ (74) Saltwater State Park: Closed ~~((the entire year))~~ year-round.

~~((77))~~ (75) Samish Beach: Closed ~~((the entire year))~~ year-round.

~~((78))~~ (76) Seahurst County Park: Closed ~~((the entire year))~~ year-round.

~~((79))~~ (77) Scenic Beach State Park: Closed ~~((the entire year))~~ year-round.

~~((80))~~ (78) Semiahmoo: Closed ~~((the entire year))~~ year-round.

~~((81))~~ (79) Semiahmoo County Park: Closed ~~((the entire year))~~ year-round.

~~((82))~~ (80) Shine Tidelands State Park: Open January 1 through May 15 only.

~~((83))~~ (81) Silverdale Waterfront Park: Closed ~~((the entire year))~~ year-round.

~~((84))~~ (82) Sinclair Inlet: Closed ~~((the entire year))~~ year-round.

~~((85))~~ (83) Skagit Wildlife Area: Closed ~~((the entire year))~~ year-round.

~~((86))~~ (84) South Carkeek Park: Closed ~~((the entire year))~~ year-round.

~~((87))~~ (85) South Gordon Point: Closed ~~((the entire year))~~ year-round.

~~((88))~~ (86) South Indian Island County Park: Open ~~((April))~~ July 1 through ~~((June))~~ September 15 only.

~~((89))~~ (87) South Mukilteo Park: Closed ~~((the entire year))~~ year-round.

~~((90))~~ (88) South Oro Bay: Closed ~~((the entire year))~~ year-round.

~~((91))~~ (89) South Point Wilson (Port Townsend): Closed ~~((the entire year))~~ year-round.

~~((92))~~ (90) Southworth Ferry Dock: Closed ~~((the entire year))~~ year-round.

~~((93))~~ (91) Spencer Spit State Park: Open March 1 through July 31 only.

~~((94))~~ ~~Suquamish (Old Man House): Closed the entire year-~~

~~((95))~~ (92) Taylor Bay: Closed ~~((the entire year))~~ year-round.

~~((96))~~ (93) Walker County Park: Closed ~~((the entire year))~~ year-round.

~~((97))~~ (94) West Pass Access: Closed ~~((the entire year))~~ year-round.

~~((98))~~ (95) Willapa Bay: State-owned tidelands east of the department Willapa Bay Field Station and the Nahcotta Tidelands Interpretive Site are open only between boundary markers and posted signs.

~~((99))~~ (96) Woodard Bay: Closed ~~((the entire year))~~ year-round.

~~((100))~~ (97) Wolfe Property State Park: Open January 1 through May 15 only.

## WSR 14-02-127

### PROPOSED RULES

### DEPARTMENT OF REVENUE

[Filed January 2, 2014, 11:45 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 13-20-123.

Title of Rule and Other Identifying Information: (1) Chapter 458-02 WAC, Consolidated licensing system, adding this new chapter to replace former business license service (BLS) rules under chapter 308-300 WAC and WAC 458-20-10101.

(2) Chapter 308-300 WAC, Consolidated licensing system, repealing this chapter, which is to be replaced by new chapter 458-02 WAC.

(3) WAC 458-20-10101, Business licensing service—Total fee payable—Handling of fees, repealing this rule, which is incorporated in new chapter 458-02 WAC.

Hearing Location(s): Capital Plaza Building, 4th Floor Executive Conference Room, 1025 Union Avenue S.E., Olympia, WA, on February 18, 2014, at 10:00 a.m. Copies of draft rules are available for viewing and printing on our web site at Rules Agenda. *Call-in option can be provided upon request.*

Date of Intended Adoption: February 25, 2014.

Submit Written Comments to: Wan Chen, P.O. Box 47453, Olympia, WA 98504-7453, e-mail WanC@dor.wa.gov, by February 18, 2014.

Assistance for Persons with Disabilities: Contact Mary Carol LaPalm, (360) 725-7499 or Renee Cosare, (360) 725-7514 no later than ten days before the hearing date. For hearing impaired please contact us via the Washington relay operator at (800) 833-6384.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The department of revenue is proposing one new chapter to replace the former BLS rules under chapter 308-300 WAC and WAC 458-20-10101. Chapter 298, Laws of 2011 and chapter 144, Laws of 2013, transferred the administration of the former master license service (MLS) program from the department of licensing to the department of revenue, and renamed the program to BLS.

Reasons Supporting Proposal: Changes in statute that the department of revenue be the administrating agency.

Statutory Authority for Adoption: RCW 19.02.030, 19.02.075, and 19.80.045.

Statute Being Implemented: Chapters 19.02 and 19.80 RCW.

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of revenue, governmental.

Name of Agency Personnel Responsible for Drafting: Wan Chen, 1025 Union Avenue S.E., Suite #544, Olympia, WA, (360) 534-1581; Implementation and Enforcement: Alan Lynn, 1025 Union Avenue S.E., Suite #544, Olympia, WA, (360) 534-1599.

No small business economic impact statement has been prepared under chapter 19.85 RCW. The rules do not impose any new requirements or administrative burden on any small business not already required by statute.

A cost-benefit analysis is not required under RCW 34.05.328. The proposed rules are not significant legislative rules as defined by RCW 34.05.328.

January 2, 2014  
Dylan Waits  
Managing Senior  
Policy Counsel

**Chapter 458-02 WAC**

**CONSOLIDATED LICENSING SYSTEM**

NEW SECTION

**WAC 458-02-100 Declaration of purpose and authority.** This chapter is adopted to implement the authority granted by RCW 19.02.030 to administer the consolidated

business license application process created under chapter 19.02 RCW, and the authority granted by RCW 19.80.045 to administer the registration of trade names under chapter 19.80 RCW.

NEW SECTION

**WAC 458-02-200 Business licensing service—Applications, licenses, renewals—Fees—Posting.** (1) **Introduction.** Information about the individual licenses that may be obtained from the business licensing service (BLS) of the department of revenue (the department) is available online at: <http://bls.dor.wa.gov/>.

(2) **What fee do I need to pay when applying for or renewing a license?** The fee payable is the total amount of all individual license fees, late filing fees, other penalty fees, and handling fees, and may include additional fees charged to cover credit or debit card processing. Licensing fees vary depending on the license(s) for which you are applying or renewing.

(3) **What does the department do with the fees?** The department will distribute the fees received for individual licenses to the respective regulatory agencies. The handling fees support the operation of the BLS.

(4) **When do I get my business license?** The business license will not be issued until the total fee payable is collected and all required information has been submitted. Some individual licenses require review and approval by the regulating authorities, and the business license will not be issued until the regulating authorities have approved them.

(5) **Can I get a refund?** The business license application and renewal handling fees collected under RCW 19.02.075 are not refundable. When a license is denied or when an applicant withdraws an application, a refund of any other refundable portion of the total payment will be made in accordance with the applicable licensing laws.

(6) **What are the handling fees?** The business license application handling fee amounts are:

Type of handling fee:	Fee amount:
Business license application filing	\$19.00
Business renewal application filing	\$11.00

(7) **What should I do with my business license?** The business license must be displayed in a conspicuous place at the business location for which the license is issued.

(8) **Do I need to renew my business license?**

(a) The various licenses displayed on the business license may each have a requirement to be renewed periodically. The department will prorate the individual license issuance fees as appropriate so that all requested licenses are renewed at the same time.

(b) Licenses requiring renewal must be renewed by the expiration date or the department will assess a delinquency fee. The regulatory agencies may also assess delinquency fees and/or penalties for late renewal, and may cancel the individual licenses for nonrenewal. Reissuance of individual

licenses canceled for nonrenewal may require the filing of a new business license application.

NEW SECTION

**WAC 458-02-201 Business licensing service—Business license transfer.** Transfer of a business license is prohibited. Transfer of each individual license held under the business license is also prohibited, unless expressly permitted by the regulatory agency's applicable licensing law. In the event of proven incapacity, death, receivership, bankruptcy, or assignment for benefit of creditors of any licensee, the business license may be transferred to a court appointed or court confirmed guardian, executor or administrator, receiver, trustee, or assignee for the benefit of creditors, who may continue to operate or conduct the licensed business activities, subject to the rules of the individual agencies.

NEW SECTION

**WAC 458-02-202 Business licensing service—Notification of changes.** (1) When the information about a business that was submitted in a business license application changes, the applicant or the licensee must immediately notify the department of the change or correction. Notification must be made in advance of a change whenever possible.

(2) Where the rules of the granting regulatory agency require advanced notice of a change, and/or the approval of the granting agency before implementing the change, the licensee must comply with that requirement.

(3) Some changes must be reported on a specific form and may require the payment of a fee.

(4) If the change is significant, a new business license application may be required, and all licenses requested on that application will be reviewed and reapproved by the respective regulating authorities.

NEW SECTION

**WAC 458-02-300 Trade names—Registration—Fees—Search—Changes.** (1) **Introduction.**

(a) Any person or persons who carries on, conducts or transacts business under a name or names that do not include the true and real name of all persons conducting that business must register that name or names with the department as trade name(s).

(b) Trade name registrations are made by completing a business license application, payment of the appropriate fees, and providing the required information.

(c) A notice of change must be filed with the department when any information in the business license application relating to the trade name registration has changed.

(d) A trade name must be canceled with the department when use of the trade name is discontinued.

(2) For the purpose of this section, applicable terms have the meaning given in RCW 19.80.005.

**(3) Can I search for a trade name?**

(a) Free search of a particular trade name is available online at [www.bls.dor.gov](http://www.bls.dor.gov).

(b) Trade name registration does not afford any brand name protection or provide you with unlimited rights for the use of that name.

**(4) What are the fees related to the trade name registration?**

Type of fee:	Fee amount:
Trade name registration	\$5.00 per name

(5) **Can I get a refund?** The fees related to trade name registrations are not refundable.

REPEALER

The following chapter of the Washington Administrative Code is repealed:

- WAC 308-300-010 Declaration of purpose and authority.
- WAC 308-300-020 Definitions.
- WAC 308-300-030 Licenses which are included on the master license.
- WAC 308-300-040 Businesses covered.
- WAC 308-300-050 Qualified applicants.
- WAC 308-300-060 Participation.
- WAC 308-300-070 Authority to prepare forms.
- WAC 308-300-080 Procedures for obtaining master application.
- WAC 308-300-090 Transfer of master license.
- WAC 308-300-100 Notification of changes.
- WAC 308-300-110 Issuance of master license.
- WAC 308-300-120 Assignment of renewal schedules.
- WAC 308-300-130 Renewal notices and procedures.
- WAC 308-300-140 Renewal of licenses.
- WAC 308-300-150 Voiding notices and procedures.
- WAC 308-300-170 Prorating of fees.
- WAC 308-300-180 Late filing procedures.
- WAC 308-300-190 Posting.
- WAC 308-300-200 Misuse of master license.
- WAC 308-300-210 Declaration of purpose and authority.
- WAC 308-300-215 Master license service (MLS) state grant program.
- WAC 308-300-220 Definitions.
- WAC 308-300-230 Required registration of trade name.
- WAC 308-300-240 Cancellation.
- WAC 308-300-250 Forms.
- WAC 308-300-260 Records—Transfer from counties to department.
- WAC 308-300-270 Searches.
- WAC 308-300-280 Fees and refunds.
- WAC 308-300-290 Cross-referencing and public access.

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 458-20-10101 Business licensing service—Total fee payable—Handling of fees.