

For RATS 2015-2 for Section 37.77(f)

333-125-0180

Physical Protection in Transit: Advance Notification of Shipment of Category 1 Quantities of Radioactive Material

(1) As specified in sections (1) and (2) of this rule, each licensee shall provide advance notification to the Authority and the Governor of a state, or the Governor's designee, of the shipment of licensed material in a category 1 quantity, through or across the boundary of the state, before the transport, or delivery to a carrier for transport of the licensed material outside the confines of the licensee's facility or other place of use or storage.

(a) Procedures for submitting advance notification. The notification must be made to the Authority and to the office of each appropriate Governor or Governor's designee. The contact information, including telephone and mailing addresses, of Governors and Governors' designees, is available on the NRC's website at <https://scp.nrc.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Material Safety, State, Tribal, and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001.

(b) A notification delivered by mail must be postmarked at least seven days before transport of the shipment commences at the shipping facility.

(c) A notification delivered by any means other than mail must reach NRC at least four days before the transport of the shipment commences and must reach the office of the Governor or the Governor's designee at least four days before transport of a shipment within or through the state.

(2) Information to be furnished in advance notification of shipment. Each advance notification of shipment of category 1 quantities of radioactive material must contain the following information, if available at the time of notification:

(a) The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;

(b) The license numbers of the shipper and receiver;

(c) A description of the radioactive material contained in the shipment, including the radionuclides and quantity;

(d) The point of origin of the shipment and the estimated time and date that shipment will commence;

(e) The estimated time and date that the shipment is expected to enter each state along the route;

(f) The estimated time and date of arrival of the shipment at the destination; and

(g) A point of contact, with a telephone number, for current shipment information.

(3)(a) Revision notice. The licensee shall provide any information not previously available at the time of the initial notification, as soon as the information becomes available but not later than commencement of the shipment, to the Governor of the state or the Governor's designee and to the Authority.

(b) A licensee shall promptly notify the Governor of the state or the Governor's designee of any changes to the information provided in accordance with sections (2) and (3) of this rule. The licensee shall also immediately notify the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001 of any such changes.

(4) Cancellation notice. Each licensee who cancels a shipment for which advance notification has been sent shall send a cancellation notice to the Governor of each state or to the Governor's designee previously notified and to the Authority. The licensee shall send the cancellation notice before the shipment has commenced or as soon thereafter as possible. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being cancelled.

(5) Records. The licensee shall retain a copy of the advance notification, any revision and cancellation notices as a record for three years after the notification has been made.

(6) Protection of information. State officials, state employees, and other individuals, whether or not licensees of the U.S. Nuclear Regulatory Commission or an Agreement State, who receive schedule information of the kind specified in section (2) of this rule shall protect that information against unauthorized disclosure as specified in OAR 333-125-0120.

Statutory/Other Authority: ORS 453.635

Statutes/Other Implemented: ORS 453.635

History:

[PH 234-2018, amend filed 08/02/2018, effective 08/16/2018](#)

For RATS 2015-3 for Section 71.4

333-118-0020

Definitions

As used in this division, the following definitions apply:

(1) "A1" means the maximum activity of special form radioactive material permitted in a Type A package. This value is either listed in Appendix A to 10 CFR Part 71, Table A-1, or may be derived in accordance with the procedures prescribed in Appendix A to 10 CFR Part 71.

(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 Appendix

A to 10 CFR Part 71, Table A-1, or may be derived in accordance with the procedures prescribed in Appendix A to 10 CFR Part 71.

(3) "Carrier" means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

(4) "Closed transport vehicle" means a transport vehicle equipped with a securely attached exterior enclosure that during normal transportation restricts the access of unauthorized persons to the cargo space containing the radioactive material. The enclosure may be either temporary or permanent but shall limit access from top, sides, and ends. In the case of packaged materials, it may be of the "see-through" type.

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

(6) "Contamination" means the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm² (1×10^{-5} μ Ci/cm²) for beta and gamma emitters and low toxicity alpha emitters, or 0.04 Bq/cm² (1×10^{-6} μ Ci/cm²) for all other alpha emitters.

(a) Fixed contamination means contamination that cannot be removed from a surface during normal conditions of transport.

(b) Non-fixed contamination means contamination that can be removed from a surface during normal conditions of transport.

(7) "Conveyance" means for transport by public highway or rail any transport vehicle or large freight container; or 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; or for transport by aircraft.

(8) "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 package, to designate the degree of control of accumulation of packages, overpacks or freight containers containing fissile material during transportation. Determination of criticality safety index is described in 10 CFR 71.22, 71.23, and 71.59. The criticality safety index for an overpack, freight container, consignment or conveyance containing fissile material packages is the arithmetic sum of the criticality safety indices of all the fissile material packages contained within the overpack, freight container, consignment or conveyance.

(9) "Deuterium" means for the purposes of 10 CFR Parts 71.15 and 71.22, deuterium and any deuterium compounds, including heavy water, in which the ratio of deuterium atoms to hydrogen atoms exceeds 1:5000.

(10) "Exclusive use" means the sole use of a conveyance by a single consignor and 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.

NOTE: The term "exclusive use" is used interchangeably with the terms "sole use" or "full load" in other regulations, such as Title 49 of the Code of Federal Regulations.

(11) "Fissile material" means the radionuclides plutonium-239, plutonium-241, uranium-233, and uranium-235, 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 10 CFR 71.15.

NOTE: Authority jurisdiction is limited to special nuclear material in quantities not sufficient to form a critical mass as defined in division 100 of this chapter.

(12) "Fissile material package" means a fissile material packaging together with its fissile material contents.

(13) "Graphite" means for the purposes of OAR 333-118-0053 and OAR 333-118-0110, graphite with a boron equivalent content less than five parts per million and density greater than 1.5 grams per cubic centimeter.

(14) "Indian Tribe" means an Indian or Alaska 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.

(15) "Licensed material" means radioactive or special nuclear material received, possessed, used, or transferred under a general or specific license issued by the Authority.

NOTE: The definition of licensed material in this division is used in the same way as in 49 CFR 173.403.

(16) "Low specific activity (LSA) material" means radioactive material with limited specific activity that is nonfissile or is excepted under OAR 333-118-0053, and that satisfies the descriptions and limits set forth below. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. LSA material must be in one of three groups:

(a) LSA-I:

(A) Uranium and thorium ores, concentrates of uranium and thorium ores, and other ores containing naturally occurring radionuclides that are intended to be processed for the use of these radionuclides;

(B) Natural uranium, depleted uranium, natural thorium, or their compounds or mixtures; provided they are unirradiated and in solid or liquid form;

(C) Radioactive material, other than fissile material, for which the A2 value is unlimited; or

(D) 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 10 CFR 71, Appendix A.

(b) LSA-II:

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

(B) Other radioactive material in which the radioactive material is distributed throughout, and the average specific activity does not exceed 10^{-4} A2/g for solids and gases, and 10^{-5} A2/g for liquids.

(c) LSA-III. Solids (consolidated wastes, activated materials) excluding powders that satisfy the requirements of 10 CFR Part 71.77 in which:

(A) 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, and ceramic);

(B) 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, shall not exceed 0.1 A2; and

(C) The estimated average specific activity of the solid, excluding any shielding, does not exceed 2×10^{-3} A2 per gram.

(17) "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 10 days.

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

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

(20) "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 DOT regulations in 49 CFR part 173.

(c) Type B package means a Type B packaging together with its radioactive contents. On approval, a Type B package design is designated by NRC as B(U) unless the package has a maximum normal operating pressure of more than 700 kPa (100 lbs/in²) gauge or a pressure relief device that may allow the release of radioactive material to the environment under the tests specified in 10 CFR 71.73 (hypothetical accident conditions), in which case it shall receive a designation B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval of international shipments. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, see DOT regulations in 49 CFR Part 173. A Type B package approved before September 6, 1983, was designated only as Type B. Limitations on its use are specified in 10 CFR 71.19.

(21) "Packaging" means the assembly of components necessary to ensure compliance with the packaging requirements of 10 CFR Part 71.4. 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.

(22) "Regulations of the U.S. Department of Transportation" means the regulations in 49 CFR Parts 100-189 and Parts 390-397.

(23) "Regulations of the U.S. Nuclear Regulatory Commission" means the regulations in 10 CFR 71.

(24) "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 five millimeters (0.2 inch.); and

(c) It satisfies the requirements of 10 CFR Part 71.75. A special form encapsulation designed in accordance with the requirements of 10 CFR Part 71.4 in effect on June 30, 1983 (see 10 CFR Part 71, revised as of January 1, 1983), and constructed before July 1, 1985; a special form encapsulation designed in accordance with the requirements of 10 CFR Part 71.4 in effect on March 31, 1996 (see 10 CFR Part 71, revised as of January 1, 1996), and constructed before April 1, 1998; and special form materials that were successfully tested before September 10, 2015 in accordance with the requirements of 10 CFR Part 71.75(d) in effect before September

10, 2015 may continue to be used. Any other special form encapsulation must meet the specifications of this definition.

(25) "Specific activity" of a radionuclide means the radioactivity of a 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.

(26) "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.

(27) "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:

(A) The non-fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4 Bq/cm² (10⁻⁴ microcurie/cm²) for beta, gamma and low toxicity alpha emitters, or 0.4 Bq/cm² (10⁻⁵ microcurie/cm²) for all other alpha emitters;

(B) The fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4x10⁴ Bq/cm² (1.0 microcurie/cm²) for beta, gamma and low toxicity alpha emitters, or 4x10³ Bq/cm² (0.1 microcurie/cm²) for all other alpha emitters; and

(C) The non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 4x10⁴ Bq/cm² (1 microcurie/cm²) for beta, gamma and low toxicity alpha emitters, or 4x10³ Bq/cm² (0.1 microcurie/cm²) for all other alpha emitters.

(b) SCO-II: a solid object on which the limits for SCO-I are exceeded and on which:

(A) The nonfixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 400 Bq/cm² (10⁻² microcurie/cm²) for beta and gamma and low toxicity alpha emitters or 40 Bq/cm² (10⁻³ microcurie/cm²) for all other alpha emitters;

(B) The fixed contamination on the accessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8 x 10⁵ Bq/cm² (20 microcuries/cm²) for beta and gamma and low toxicity alpha emitters, or 8 x 10⁴ Bq/cm² (2 microcuries/cm²) for all other alpha emitters; and

(C) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8 x 10⁵

Bq/cm² (20 microcuries/cm²) for beta and gamma and low toxicity alpha emitters, or 8×10^4 Bq/cm² (2 microcuries/cm²) for all other alpha emitters.

(28) "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 one meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at one meter (3.3 ft)).

(29) "Tribal official" means the highest ranking individual that represents Tribal leadership, such as the Chief, President, or Tribal Council leadership.

(30) "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 10 CFR Part 71 Appendix A or may be determined by procedures described in 10 CFR Part 71 Appendix A.

(31) "Type A package" means a packaging that, together with its radioactive contents limited to A1 or A2 as appropriate, meets the requirements of 49 CFR 173.410 and 173.412 and is designed to retain the integrity of containment and shielding under normal conditions of transport as demonstrated by the tests set forth in 173.465 or 173.466, as appropriate.

(32) "Type B package" means a Type B packaging together with its radioactive contents.

NOTE: A Type B package design is designated as B(U) or B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, refer to 49 CFR Part 173. A Type B package approved prior to September 6, 1983, was designated only as Type B. Limitations on its use are specified in OAR 333-118-0035.

(33) "Type B packaging" means a packaging designed to retain the integrity of containment and shielding when subjected to the normal conditions of transport and hypothetical accident test conditions set forth in 10 CFR Part 71.

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

NOTE: 10 CFR Part 71 Appendix A referred to or incorporated by reference in this rule is attached to this division or available from the Authority.

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

(36) "Uranium — natural, depleted, enriched":

(a) "Natural uranium" means uranium (which may be chemically separated) with the naturally occurring distribution of uranium, isotopes (which is approximately 0.711 weight percent uranium-235, and the remainder by weight essentially uranium-238).

(b) "Depleted uranium" means uranium containing less uranium-235 than the naturally occurring distribution of uranium isotopes.

(c) "Enriched uranium" means uranium containing more uranium-235 than the naturally occurring distribution of uranium isotopes.

Statutory/Other Authority: ORS 453.635

Statutes/Other Implemented: ORS 453.605 - 453.807

History:

[PH 234-2018, amend filed 08/02/2018, effective 08/16/2018](#)

For RATS 2015-3 for Section 71.17

333-118-0070

General License: Nuclear Regulatory Commission-Approved Packages

(1) A general license is hereby issued to any licensee of the Authority to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, Certificate of Compliance (CoC), or other approval has been issued by the U.S. Nuclear Regulatory Commission.

(2) This general license applies only to a licensee who has a quality assurance program approved by the Authority as satisfying the provisions of 10 CFR Part 71, subpart H and any applicable requirements in OAR 333-118-0200.

(3) Each licensee issued a general license under section (1) of this rule shall:

(a) Maintain a copy of the Certificate of Compliance, or other approval of the package, and 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) Comply with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of 10 CFR Parts 71, subparts A, G, and H; and

(c) Submit in writing before the first use of the package to: ATTN: Radiation Protection Services, 800 NE Oregon St. Suite 640, Portland Oregon 97232, using an appropriate method listed in 10 CFR Parts 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 U.S. Nuclear Regulatory Commission before April 1, 1996, the general license is subject to the additional restrictions of 10 CFR Parts 71.19.

Statutory/Other Authority: ORS 453.635

Statutes/Other Implemented: ORS 453.605 - 453.807

History:

[PH 234-2018, amend filed 08/02/2018, effective 08/16/2018](#)