AMENDATORY SECTION (Amending WSR 22-11-063, filed 5/16/22, effective 6/16/22)

WAC 246-237-010 Definitions, abbreviations, and acronyms. The definitions, abbreviations, and acronyms in this section and in WAC 246-220-010 apply throughout this chapter unless the context clearly indicates otherwise:

(1) "Access control" means a system for allowing only approved individuals to have unescorted access to the security zone and for ensuring that all other individuals are subject to escorted access.

(2) "Act" means the Atomic Energy Act of 1954, including any amendments thereto.

(3) "Aggregated" means accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a Category 2 quantity of radioactive material.

(4) "Agreement state" means any state with which the Atomic Energy Commission or the NRC has entered into an effective agreement under subsection 274b of the act. Nonagreement state means any other state.

(5) "Approved individual" means an individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with WAC 246-237-021 through 246-237-033 and who has completed the training required by WAC 246-237-043(3).

(6) "Background investigation" means the investigation conducted by a licensee or applicant to support the determination of trustworthiness and reliability.

(7) "Becquerel (Bq)" means the SI unit of activity. One becquerel is equal to (( $\pm$ )) <u>one</u> disintegration or transformation per second (s<sup>-1</sup>).

(8) "By-product material" means:

(a) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(b) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition;

(c)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that:

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(d) Any discrete source of naturally occurring radioactive material, other than source material, that:

(i) The NRC, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

(9) "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.

(10) "Category 1 quantity of radioactive material" means a quantity of radioactive material meeting or exceeding the Category 1 threshold in Table 1 of WAC 246-237-900 Appendix A: Table 1—Category 1 and Category 2. This is determined by calculating the ratio of the total activity of each radionuclide to the Category 1 threshold for that radionuclide and adding the ratios together. If the sum equals or exceeds  $((\frac{1}{2}))$  one, the quantity would be considered a Category 1 quantity. Category 1 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet.

(11) "Category 2 quantity of radioactive material" means a quantity of radioactive material meeting or exceeding the Category 2 threshold but less than the Category 1 threshold in Table 1 of WAC 246-237-900 Appendix A: Table 1—Category 1 and Category 2. This is determined by calculating the ratio of the total activity of each radionuclide to the Category 2 threshold for that radionuclide and adding the ratios together. If the sum equals or exceeds one, the quantity would be considered a Category 2 quantity. Category 2 quantities of radioactive material do not include the radioactive material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. (12) "Curie" means a unit of quantity of radioactivity. One curie

(12) "Curie" means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of  $3.7 \times 10^{10}$  transformations per second (tps).

(13) "Diversion" means the unauthorized movement of radioactive material subject to this chapter to a location different from the material's authorized destination inside or outside of the site at which the material is used or stored.

(14) "Escorted access" means accompaniment while in a security zone by an approved individual who maintains continuous direct visual surveillance at all times over an individual who is not approved for unescorted access.

(15) "FBI" means the federal bureau of investigation.

(16) "Fingerprint orders" means the orders issued by the NRC or the legally binding requirements issued by agreement states that require fingerprints and criminal history records checks for individuals with unescorted access to Category 1 and Category 2 quantities of radioactive material or safeguards information-modified handling.

(17) "Government agency" means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government.

(18) "License" means, except where otherwise specified, a license for radioactive material issued pursuant to the regulations in chapters 246-232, 246-233, 246-235, 246-240, 246-243, or 246-244 WAC.

(19) "License issuing authority" means the licensing agency (the department, NRC, or an agreement state) that issued the license.

(20) "LLEA (local law enforcement agency)" means a public or private organization that has been approved by a federal, state, or local government to carry firearms and make arrests, and is authorized and has the capability to provide an armed response in the jurisdiction where the licensed Category 1 or Category 2 quantity of radioactive material is used, stored, or transported.

(21) "Lost or missing licensed material" means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

(22) "Mobile device" means a piece of equipment containing licensed radioactive material that is either mounted on wheels or casters, or otherwise equipped for moving without a need for disassembly or dismounting; or designed to be hand carried. Mobile devices do not include stationary equipment installed in a fixed location.

(23) "Movement control center" means an operations center that is remote from transport activity and that maintains position information on the movement of radioactive material, receives reports of attempted attacks or thefts, provides a means for reporting these and other problems to appropriate agencies, and can request and coordinate appropriate aid.

(24) "No-later-than arrival time" means the date and time that the shipping licensee and receiving licensee have established as the time at which an investigation will be initiated if the shipment has not arrived at the receiving facility. The no-later-than arrival time may not be more than six hours after the estimated arrival time for shipments of Category 2 quantities of radioactive material.

(25) "NRC" or "commission" means the U.S. Nuclear Regulatory Commission.

(26) "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than NRC or the Department of Energy, any state or any political subdivision of, or any political entity within, a state, any foreign government or nation, or any political subdivision of any such government or nation, or other entity, and any legal successor, representative, agent or agency of the foregoing. (27) "Reviewing official" means the individual who makes the

(27) "Reviewing official" means the individual who makes the trustworthiness and reliability determination of an individual to determine whether the individual may have, or continue to have, unescorted access to the Category 1 or Category 2 quantities of radioactive materials that are possessed by the licensee.

(28) "Sabotage" means deliberate damage, with malevolent intent, to a Category 1 or Category 2 quantity of radioactive material, a device that contains a Category 1 or Category 2 quantity of radioactive material, or the components of the security system.

(29) "Safe haven" means a readily recognizable and readily accessible site at which security is present or from which, in the event of an emergency, the transport crew can notify and wait for the local law enforcement authorities.

(30) "Security zone" means any temporary or permanent area determined and established by the licensee for the physical protection of Category 1 or Category 2 quantities of radioactive material.

(31) "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.

(32) "Telemetric position monitoring system" means a data transfer system that captures information by instrumentation or measuring devices about the location and status of a transport vehicle or package between the departure and destination locations.

(33) "Trustworthiness and reliability" are characteristics of an individual considered dependable in judgment, character, and performance, such that unescorted access to Category 1 or Category 2 quantities of radioactive material by that individual does not constitute an unreasonable risk to the public health and safety or security. A determination of trustworthiness and reliability for this purpose is based upon the results from a background investigation.

(34) "Unescorted access" means solitary access to an aggregated Category 1 or Category 2 quantity of radioactive material or the devices that contain the material.

(35) "United States" means when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-011 Specific exemptions. (1) The department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the rules in this chapter as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

(2) Any licensee's activities are exempt from the requirements of WAC 246-237-021 through 246-237-057 to the extent that its activities are included in a security plan required by 10 C.F.R. Part 73.

(3) A licensee who possesses radioactive waste that contains Category 1 or Category 2 quantities of radioactive material is exempt from the requirements of WAC 246-237-021 through 246-237-081, except that any radioactive waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than ((<del>two thousand</del>)) <u>2,000</u> kg (((<del>four thousand four hundred nine</del>)) <u>4,409</u> pounds) is not exempt from the requirements of this chapter. The licensee shall implement the following requirements to secure the radioactive waste:

(a) Use continuous physical barriers which allow access to the radioactive waste only through established access control points;

(b) Use a locked door or gate with monitored alarm at the access control point;

(c) Assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and

(d) Immediately notify the LLEA and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage, or diversion of the radioactive waste that contains Category 1 or Category 2 quantities of radioactive material. AMENDATORY SECTION (Amending WSR 17-01-034, filed 12/12/16, effective 1/12/17)

WAC 246-237-025 Background investigations. (1) Initial investigation. Before allowing an individual unescorted access to Category 1 or Category 2 quantities of radioactive material or to the devices that contain the material, licensees shall complete a background investigation of the individual seeking unescorted access authorization. The scope of the investigation must encompass at least the seven years preceding the date of the background investigation or since the individual's ((eighteenth)) <u>18th</u> birthday, whichever is shorter. The background investigation must include at a minimum:

(a) Fingerprinting and an FBI identification and criminal history records check in accordance with WAC 246-237-027;

(b) Verification of true identity. Licensees shall verify the true identity of the individual who is applying for unescorted access authorization to ensure that the applicant is who they claim to be. A licensee shall review official identification documents (driver's license; passport; government identification; certificate of birth issued by the state, province, or country of birth) and compare the documents to personal information data provided by the individual to identify any discrepancy in the information. Licensees shall document the type, expiration, and identification number of the identification document, or maintain a photocopy of identifying documents on file in accordance with WAC 246-237-031. Licensees shall certify in writing that the identification was properly reviewed, and shall maintain the certification and all related documents for review upon inspection;

(c) Employment history verification. Licensees shall complete an employment history verification, including military history. Licensees shall verify the individual's employment with each previous employer for the most recent seven years before the date of application;

(d) Verification of education. Licensees shall verify that the individual participated in the education process during the claimed period;

(e) Character and reputation determination. Licensees shall complete reference checks to determine the character and reputation of the individual who has applied for unescorted access authorization. Unless other references are not available, reference checks may not be conducted with any person who is known to be a close member of the individual's family including, but not limited to, the individual's spouse, parents, siblings, or children, or any individual who resides in the individual's permanent household. Reference checks under this chapter must be limited to whether the individual has been and continues to be trustworthy and reliable;

(f) The licensee shall also, to the extent possible, obtain independent information to corroborate that provided by the individual (for example, seek references not supplied by the individual); and

(g) If a previous employer, educational institution, or any other entity with which the individual claims to have been engaged fails to provide information or indicates an inability or unwillingness to provide information within a time frame deemed appropriate by the licensee but at least after ((ten)) <u>10</u> business days of the request or if the licensee is unable to reach the entity, the licensee shall document the refusal, unwillingness, or inability in the record of investigation; and attempt to obtain the information from an alternate source. (2) Grandfathering.

(a) Individuals who have been determined to be trustworthy and reliable for unescorted access to Category 1 or Category 2 quantities of radioactive material under the fingerprint orders may continue to have unescorted access to Category 1 and Category 2 quantities of radioactive material without further investigation. These individuals shall be subject to the reinvestigation requirement.

(b) Individuals who have been determined to be trustworthy and reliable under the provisions of 10 C.F.R. Part 73 or the security orders for access to safeguards information, safeguards informationmodified handling, or risk-significant material may have unescorted access to Category 1 and Category 2 quantities of radioactive material without further investigation. The licensee shall document that the individual was determined to be trustworthy and reliable under the provisions of 10 C.F.R. Part 73 or a security order. Security order, in this context, refers to any order that was issued by the NRC that required fingerprints and an FBI criminal history records check for access to safeguards information, safeguards information-modified handling, or risk-significant material such as special nuclear material or large quantities of uranium hexafluoride. These individuals shall be subject to the reinvestigation requirement.

(3) Reinvestigations. Licensees shall conduct a reinvestigation every ((ten)) <u>10</u> years for any individual with unescorted access to Category 1 or Category 2 quantities of radioactive material. The reinvestigation shall consist of fingerprinting and an FBI identification and criminal history records check in accordance with WAC 246-237-027. The reinvestigations must be completed within ((ten)) <u>10</u> years of the date on which these elements were last completed.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

## WAC 246-237-041 Security program. (1) Applicability.

(a) Each licensee who possesses an aggregated Category 1 or Category 2 quantity of radioactive material shall establish, implement, and maintain a security program in accordance with the requirements of this chapter.

(b) An applicant for a new license, and each licensee who would become newly subject to the requirements of this chapter, upon application for modification of its license, shall implement the requirements of this chapter, as appropriate, before taking possession of an aggregated Category 1 or Category 2 quantity of radioactive material.

(c) Any licensee who has not previously implemented the security orders or been subject to the provisions of WAC 246-237-041 through 246-237-057 shall provide written notification to the department at least ((ninety)) <u>90</u> days before aggregating radioactive material to a quantity that equals or exceeds the Category 2 threshold.

(2) General performance objective. Each licensee shall establish, implement, and maintain a security program designed to monitor and, without delay, detect, assess, and respond to an actual or attempted unauthorized access to Category 1 or Category 2 quantities of radioactive material. (3) Program features. Each licensee's security program must include the program features, as appropriate, described in WAC 246-237-043 through 246-237-055.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-045 LLEA coordination. (1) A licensee subject to this chapter shall coordinate, to the extent practicable, with a LLEA for responding to threats to the licensee's facility, including any necessary armed response. The information provided to the LLEA must include:

(a) A description of the facilities and the Category 1 and Category 2 quantities of radioactive materials along with a description of the licensee's security measures which have been implemented to comply with this chapter; and

(b) A notification that the licensee will request a timely armed response by the LLEA to any actual or attempted theft, sabotage, or diversion of Category 1 or Category 2 quantities of material.

(2) The licensee shall notify the department within three business days if:

(a) The LLEA has not responded to the request for coordination within ((sixty)) 60 days of the coordination request; or

(b) The LLEA notifies the licensee that the LLEA does not plan to participate in coordination activities.

(3) The licensee shall document its efforts to coordinate with the LLEA. The documentation must be kept for three years.

(4) The licensee shall coordinate with the LLEA at least every ((twelve)) <u>12</u> months, or when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material to theft, sabotage, or diversion.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-051 Maintenance and testing. (1) Each licensee subject to this chapter shall implement a maintenance and testing program to ensure that intrusion alarms, associated communication systems, and other physical components of the systems used to secure or detect unauthorized access to radioactive material are maintained in operable condition and are capable of performing their intended function when needed. The equipment relied on to meet the security requirements of this part must be inspected and tested for operability and performance at the manufacturer's suggested frequency. If there is no suggested manufacturer's suggested frequency, the testing must be performed at least annually, not to exceed ((twelve)) <u>12</u> months.

(2) The licensee shall maintain records of the maintenance and testing activities for three years.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-057 Reporting of events. (1) The licensee shall immediately notify the LLEA after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the LLEA response to the event, the licensee shall notify the department. In no case shall the notification to the department be later than four hours after the discovery of any attempted or actual theft, sabotage, or diversion.

(2) The licensee shall assess any suspicious activity related to possible theft, sabotage, or diversion of Category 1 or Category 2 quantities of radioactive material and notify the LLEA as appropriate. As soon as possible but not later than four hours after notifying the LLEA, the licensee shall notify the department.

(3) The initial telephonic notification required by subsection (1) of this section must be followed within a period of  $((\frac{\text{thirty}}))$  30 days by a written report submitted to the department. The report must include sufficient information for department analysis and evaluation, including identification of any necessary corrective actions to prevent future instances.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-079 Requirements for physical protection of Category 1 and Category 2 quantities of radioactive material during shipment. (1) Shipments by road.

(a) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a Category 1 quantity of radioactive material shall:

(i) Ensure that movement control centers are established that maintain position information from a remote location. These control centers must monitor shipments ((twenty-four)) 24 hours a day, seven days a week, and have the ability to communicate immediately, in an emergency, with the appropriate law enforcement agencies.

(ii) Ensure that redundant communications are established that allow the transport to contact the escort vehicle (when used) and movement control center at all times. Redundant communications may not be subject to the same interference factors as the primary communication.

(iii) Ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. A movement control center must provide positive confirmation of the location, status, and control over the shipment. The movement control center must be prepared to promptly implement preplanned procedures in response to deviations from the authorized route or a notification of actual, attempted, or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route.

(iv) Provide an individual to accompany the driver for those highway shipments with a driving time period greater than the maximum number of allowable hours of service in a ((twenty-four)) <u>24</u> hour duty day as established by the Department of Transportation Federal Motor Carrier Safety Administration. The accompanying individual may be another driver.

(v) Develop written normal and contingency procedures to address:

(A) Notifications to the communication center and law enforcement agencies;

(B) Communication protocols. Communication protocols must include a strategy for the use of authentication codes and duress codes and provisions for refueling or other stops, detours, and locations where communication is expected to be temporarily lost;

(C) Loss of communications; and

(D) Responses to an actual or attempted theft or diversion of a shipment.

(vi) Each licensee who makes arrangements for the shipment of Category 1 quantities of radioactive material shall ensure that drivers, accompanying personnel, and movement control center personnel have access to the normal and contingency procedures.

(b) Each licensee who transports Category 2 quantities of radioactive material shall maintain constant control or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance.

(c) Each licensee who delivers to a carrier for transport, in a single shipment, a Category 2 quantity of radioactive material shall:

(i) Use carriers who have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control or surveillance, the package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.

(ii) Use carriers who maintain constant control or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and

(iii) Use carriers who have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

(2) Shipments by rail.

(a) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a Category 1 quantity of radioactive material shall:

(i) Ensure that rail shipments are monitored by a telemetric position monitoring system or an alternative tracking system reporting to the licensee, third-party, or railroad communications center. The communications center shall provide positive confirmation of the location of the shipment and its status. The communications center shall implement preplanned procedures in response to deviations from the authorized route or to a notification of actual, attempted, or suspicious activities related to the theft or diversion of a shipment. These procedures will include, but not be limited to, the identification of and contact information for the appropriate LLEA along the shipment route. (ii) Ensure that periodic reports to the communications center are made at preset intervals.

(b) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a Category 2 quantity of radioactive material shall:

(i) Use carriers who have established package tracking systems. An established package tracking system is a documented, proven, and reliable system routinely used to transport objects of value. In order for a package tracking system to maintain constant control or surveillance, the package tracking system must allow the shipper or transporter to identify when and where the package was last and when it should arrive at the next point of control.

(ii) Use carriers who maintain constant control or surveillance during transit and have the capability for immediate communication to summon appropriate response or assistance; and

(iii) Use carriers who have established tracking systems that require an authorized signature prior to releasing the package for delivery or return.

(3) Investigations. Each licensee who makes arrangements for the shipment of Category 1 quantities of radioactive material shall immediately conduct an investigation upon discovery that a Category 1 shipment is lost or missing. Each licensee who makes arrangements for the shipment of Category 2 quantities of radioactive material shall immediately conduct an investigation, in coordination with the receiving licensee, of any shipment that has not arrived by the designated no-later-than arrival time.

<u>AMENDATORY SECTION</u> (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-081 Reporting requirements. (1) The shipping licensee shall notify the appropriate LLEA and the department within one hour of its determination that a shipment of Category 1 quantities of radioactive material is lost or missing. The appropriate LLEA would be the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by WAC 246-237-079(3), the shipping licensee will provide agreed upon updates to the department on the status of the investigation.

(2) The shipping licensee shall notify the department within four hours of its determination that a shipment of Category 2 quantities of radioactive material is lost or missing. If, after ((<del>twenty-four</del>)) <u>24</u> hours of the determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify the department.

(3) The shipping licensee shall notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to the theft or diversion of a shipment of a Category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify the department upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of Category 1 radioactive material. (4) The shipping licensee shall notify the department as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of a Category 2 quantity of radioactive material.

(5) The shipping licensee shall notify the department and the LLEA as soon as possible upon recovery of any lost or missing Category 1 quantities of radioactive material.

(6) The shipping licensee shall notify the department as soon as possible upon recovery of any lost or missing Category 2 quantities of radioactive material.

(7) The initial telephonic notification required by subsections (1) through (4) of this section must be followed within a period of ((thirty)) <u>30</u> days by a written report submitted to the department by an appropriate method. A written report is not required for notifications of suspicious activities required by subsections (3) and (4) of this section. In addition, the licensee shall provide a copy of the written report to the department. The report must set forth the following information:

(a) A description of the licensed material involved, including kind, quantity, chemical and physical form;

(b) A description of the circumstances under which the loss or theft occurred;

(c) A statement of disposition, or probable disposition, of the licensed material involved;

(d) Actions that have been taken, or will be taken, to recover the material; and

(e) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.

(8) Subsequent to filing the written report, the licensee shall also report any additional substantive information about the loss or theft to the department within ((thirty)) <u>30</u> days after the licensee learns of such information.

AMENDATORY SECTION (Amending WSR 16-13-079, filed 6/14/16, effective 7/15/16)

WAC 246-237-900 Appendix A: Table 1—Category 1 and Category 2 thresholds. Terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values provided for practical usefulness only.

Radioactive material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2

Radioactive material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Note: Calculations Concerning Multiple Sources or Multiple Radionuclides

The "sum of fractions" methodology for evaluating combinations of multiple sources or multiple radionuclides is to be used in determining whether a location meets or exceeds the threshold and is thus subject to the requirements of this chapter.

I. If multiple sources of the same radionuclide or multiple radionuclides are aggregated at a location, the sum of the ratios of the total activity of each of the radionuclides must be determined to verify whether the activity at the location is less than the Category 1 or Category 2 thresholds of Table 1, as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, then the applicable requirements of this chapter apply.

II. First determine the total activity for each radionuclide from Table 1. This is done by adding the activity of each individual source, material in any device, and any loose or bulk material that contains the radionuclide. Then use the equation below to calculate the sum of the ratios by inserting the total activity of the applicable radionuclides from Table 1 in the numerator of the equation and the corresponding threshold activity from Table 1 in the denominator of the equation. Calculations must be performed in metric values (TBq) and the numerator and denominator values must be in the same units.

 $\rm R_1=$  total activity for radionuclide 1  $\rm R_2=$  total activity for radionuclide 2  $\rm R_N=$  total activity for radionuclide n  $\rm AR_1=$  activity threshold for radionuclide 1  $\rm AR_2=$  activity threshold for radionuclide 2  $\rm AR_N=$  activity threshold for radionuclide n

((

$$\sum_{n=1}^{n} \left[ \frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \ge 1.0$$

))

$$\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \dots + \frac{R_n}{AR_n} \ge 1.0$$