Title 33
ENVIRONMENTAL QUALITY
Part XV. Radiation Protection

Chapter 7. Use of Radionuclides in the Healing Arts

§763. Training

A. – C. …

1. who is certified by a medical specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in ~~Subp~~Paragraph C.4~~3.b~~ of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1.a. – 3.a.ii.(f). …

~~b~~4. has obtained written attestation, signed by a preceptor authorized user who meets the requirements in Subsection B or C or D or Paragraph E.1 of this Section, or equivalent agreement state requirements or Nuclear Regulatory Commission requirements, that the individual has satisfactorily completed the requirements in Subparagraph C.1.a or C.3.a of this Section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized in LAC 33:XV.729.

D. …

1. who is certified by a medical specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in ~~Subp~~Paragraph D.4~~3.b~~ of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement

state will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1.a. – 3.a.ii.(g). …

~~b~~4. has obtained written attestation, signed by a preceptor authorized user who meets the requirements in this Subsection, Subsection B or Subclause D.3.a.ii.(f) and Paragraph E.1 of this Section, or equivalent agreement state requirements, or Nuclear Regulatory Commission requirements that the individual has satisfactorily completed the requirements in Subparagraph D.1.a or D.3.a of this Section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized in LAC 33:XV.729 and LAC 33:XV.731.H.

E. – E.1. …

a. who is certified by a medical specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in Division E.1.b.i.(b).(vii) and Subparagraph~~Clause~~ E.1.c~~b.ii~~ of this Section. (Specialty boards whose certification processes have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.) To be recognized, a specialty board shall require all candidates for certification to:

a.i. – b.i.(b).(vii).[d]. …

~~ii~~c. has obtained written attestation that the individual has satisfactorily completed the requirements in Clause E.1.a.i and Division E.1.b.i.(b).(vii) or Clause E.1.b.i of this Section, and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized in LAC 33:XV.735.C. The written attestation shall be signed by a preceptor authorized user who meets the requirements in this Paragraph,

Subsection B of this Section or equivalent agreement state requirements or Nuclear Regulatory Commission requirements. The preceptor authorized user who meets the requirements in Subparagraph E.1.b of this Section shall have experience in administering dosages in the same dosage category or categories (i.e., Division E.1.b.i.(b).(vii) of this Section) as the individual requesting authorized user status.

2. …

a. who is certified by a medical specialty board whose certification process includes all of the requirements in Clauses E.2.c.i and ii of this Section and whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in Subparagraph~~Clause~~ E.2.d~~c.iii~~ of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.); or

b. – c.ii.(f). …

~~iii~~d. has obtained written attestation that the individual has satisfactorily completed the requirements in Clauses E.2.c.i and ii of this Section, and has achieved a level of competency sufficient to function independently as an authorized user for medical uses authorized in LAC 33:XV.735.C. The written attestation shall be signed by a preceptor authorized user who meets the requirements in Subsection B or Paragraph E.1, 2, or 3 of this Section, or equivalent agreement state requirements or Nuclear Regulatory Commission requirements. A preceptor authorized user who meets the requirement in Subparagraph E.1.b of this Section shall also have experience in administering dosages as specified in Subdivision E.1.b.i.(b).(vii).[a] or [b] of this Section.

3. …

a. who is certified by a medical specialty board whose certification process includes all of the requirements in Clauses E.3.c.i and ii of this Section and whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in Subparagraph~~Clause~~ E.3.d~~e.iii~~ of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.); or

b. – c.ii.(f). …

~~iii~~d. has obtained written attestation that the individual has satisfactorily completed the requirements in Clauses E.3.c.i and ii of this Section, and has achieved a level of competency sufficient to function independently as an authorized user for medical uses authorized in LAC 33:XV.735.C. The written attestation shall be signed by a preceptor authorized user who meets the requirements in Subsection B or Paragraph E.1 or 3 of this Section, or equivalent agreement state requirements or Nuclear Regulatory Commission requirements. A preceptor authorized user who meets the requirements in Subparagraph E.1.b of this Section shall also have experience in administering dosages as specified in Subdivision E.1.b.i.(b).(vii).[b] of this Section.

4. – 4.d.ii.(f). …

~~iii~~e. has obtained written attestation that the individual has satisfactorily completed the requirements in Subparagraph E.4.b or c of this Section, and has achieved a level of competency sufficient to function independently as an authorized user for the parenteral administration of unsealed byproduct material requiring a written directive. The written attestation shall be signed by a preceptor authorized user who meets the requirements in Subsection B or Paragraph E.1 or 4 of this Section, or equivalent agreement state requirements or

Nuclear Regulatory Commission requirements. A preceptor authorized user who meets the requirements in Paragraph E.1 of this Section shall have experience in administering dosages as specified in Subdivisions E.1.b.i.(b).(vii).[c] and/or [d] of this Section.

F. …

1. who is certified by a medical specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in ~~Subp~~Paragraph F.3~~2.e~~ of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1.a. – 2.b. …

~~e~~3. has obtained written attestation, signed by a preceptor authorized user who meets the requirements in this Subsection, Subsection B of this Section or equivalent agreement state requirements, or Nuclear Regulatory Commission requirements that the individual has satisfactorily completed the requirements in Subparagraph F.1.a, or Paragraph F.2.a and b of this Section, and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized in LAC 33:XV.741.

G. – G.2.b.iv. …

~~e~~3. has obtained written attestation, signed by a preceptor authorized user who meets the requirements in Subsections B or F and G of this Section, or equivalent agreement state requirements, or Nuclear Regulatory Commission requirements that the individual has satisfactorily completed the requirements in Paragraphs G.1 and 2 of this Section and has

achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use.

H. – I. …

1. who is certified by a medical specialty board whose certification process has been recognized by the commission or an agreement state, and who meets the requirements in ~~Subp~~Paragraphs I.~~3~~2.~~e~~ and ~~Paragraph I.3~~4 of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1.a. – 2.b. …

~~e~~3. has obtained written attestation that the individual has satisfactorily completed the requirements in Subparagraph I.1.a or Subparagraphs I.2.a and b and Paragraph I.~~3~~4 of this Section, and has achieved a level of competency sufficient to function independently as an authorized user of each type of therapeutic medical unit for which the individual is requesting authorized user status. The written attestation must be signed by a preceptor authorized user who meets the requirements in this Subsection or Subsection B of this Section or equivalent agreement state requirements or Nuclear Regulatory Commission requirements for an authorized user for each type of therapeutic medical unit for which the individual is requesting authorized user status; and

~~3~~4. who has received training in device operation, safety procedures, and clinical use for the type(s) of use for which authorization is sought. This training requirement may be satisfied by satisfactory completion of a training program provided by the vendor for new users or by receiving training supervised by an authorized user or authorized medical

physicist, as appropriate, who is authorized for the type(s) of use for which the individual is seeking authorization.

J. …

1. who is certified by a specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in ~~Subp~~Paragraphs J.~~3~~2.~~b~~ and ~~Paragraph J.3~~4 of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1.a. – 2.a.iv. …

~~b~~3. has obtained written attestation that the individual has satisfactorily completed the requirements in Subparagraphs J.1.a and b and Paragraph J.~~3~~4, or Subparagraph J.2.a and Paragraph J.~~3~~4, of this Section, and has achieved a level of competency sufficient to function independently as an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in this Subsection, Subsection B of this Section or equivalent agreement state requirements or Nuclear Regulatory Commission requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status; and

~~3~~4. who has training for the type(s) of use for which authorization is sought that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system. This training requirement may be satisfied by satisfactorily

completing either a training program provided by the vendor or by training supervised by an authorized medical physicist authorized for the type(s) of use for which the individual is seeking authorization.

K. …

1. who is certified by a specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an agreement state, and who meets the requirements in ~~Subp~~Paragraph K.3~~2.b~~ of this Section. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an agreement state will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1.a. – 2.a.ii.(e). …

~~b~~3. has obtained written attestation, signed by a preceptor authorized nuclear pharmacist, that the individual has satisfactorily completed the requirements in Subparagraphs K.1.a, b, and c, or Paragraph K.2, of this Section and has achieved a level of competency sufficient to function independently as an authorized nuclear pharmacist.

L. – M. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq., and 2104.B.(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 18:34 (January 1992), amended LR 24:2106 (November 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2590 (November 2000), LR 30:1186 (June 2004), amended by the Office of Environmental Assessment, LR 31:1061 (May 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:814 (May 2006), LR 34:983 (June 2008), LR 34:2121 (October 2008), LR 36:1772 (August 2010), amended by the Office of the Secretary, Legal Division, LR 38:2748 (November 2012), LR 40:1342 (July 2014), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 44:2137 (December 2018), LR 45:

Chapter 15. Transportation of Radioactive Material

§1501. Purpose

A. The regulations in this Chapter establish requirements for packaging, preparation for shipment, and transportation of ~~radioactive~~licensed material.

B. The packaging and transport of ~~radioactive~~licensed material are also subject to other Chapters of LAC 33:XV (such as LAC 33:XV.Chapters 3 and 4), and to the regulations of other agencies (such as the United States Department of Transportation (U.S. DOT)) and the United States Postal Service) having jurisdiction over means of transport. The requirements of this Chapter are in addition to, and not in substitution for, other requirements.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2103 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1502. Scope

~~NOTE: Former Subsections B-D have moved to §1504.~~

A. The regulations in this Chapter apply to any specific or general licensee authorized to receive, possess, use, or transfer ~~radioactive~~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 in this Chapter authorizes possession of ~~radioactive~~licensed material.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1265 (June 2000), LR 26:2771 (December 2000), LR 27:1238 (August 2001), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2103 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1503. Definitions

A. As used in this Chapter, the following definitions apply.

* * *

Contamination—the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm^2 (1 × 10^{-5} μCi/cm^2) for beta and gamma emitters and low toxicity alpha emitters, or 0.04 Bq/cm^2 (1 × 10^{-6} μCi/cm^2) for all other alpha emitters.

a. *Fixed contamination*—contamination that cannot be removed from a surface during normal conditions of transport.

b. *Non-fixed contamination*—contamination that can be removed from a surface during normal conditions of transport.

* * *

Criticality Safety Index (CSI)—the dimensionless number (rounded up to the ~~first decimal place~~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 the *criticality safety index* is described in LAC 33:XV.1511 and 1512 and in 10 CFR 71.59. The *criticality safety inde*x 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.

* * *

Low Specific Activity (LSA) Material—radioactive material with limited specific activity that is nonfissile or that is excepted under LAC 33:XV.1505.C, 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~~shall 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 that are ~~not~~ intended to be processed for the use of these radionuclides;

ii. ~~solid unirradiated~~ natural uranium, depleted uranium, natural thorium, or their ~~solid or liquid~~ compounds or mixtures, provided they are unirradiated and in solid or liquid form;

iii. radioactive material other than fissile material, for which the A_2 value is unlimited; or

iv. …

b. LSA-II:

i. …

ii. other radioactive material in which the activity is distributed throughout, and the estimated average specific activity does not exceed 10^{-4} A_2/g for solids and gases, and 10^{-5} A_2/g for liquids.

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

i. – ii. …

iii. the estimated average specific activity of the solid, excluding any shielding material, does not exceed 2×10^{-3} A_2/g.

* * *

Special Form Radioactive Material—radioactive material that satisfies the following conditions:

a. …

b. the piece or capsule has at least one dimension not less than 5 millimeters (0.~~197~~2 inch); and

c. it satisfies the ~~test~~ requirements of 10 CFR 71.75. A special form encapsulation designed in accordance with the requirements of 10 CFR 71.4 in effect on June 30, 1983 (see 10 CFR Part 71, revised as of January 1, 1983), and constructed prior to July 1, 1985~~,~~; ~~and~~ a special form encapsulation designed in accordance with the requirements of 10 CFR 71.4 in effect on March 31, 1996 (see 10 CFR Part 71, revised as of January 1, 19~~83~~96), and constructed before April 1, 1998~~,~~; and special form material that was successfully tested before September 10, 2015 in accordance with the requirements of 10 CFR 71.75(d) in effect before September 10, 2015 may continue to be used. Any other special form encapsulation ~~must~~shall meet the specifications of this definition.

* * *

Uranium: Natural, Depleted, Enriched—

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

b. – c. …

* * *

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1265 (June 2000), amended by the Office of Environmental Assessment, LR 31:55 (January 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2103 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1504. Requirements for the Transportation of ~~Radioactive~~Licensed Material

~~[Formerly Subsections C – E existed in §1502.]~~

A. Except as authorized in a general or specific license issued by the department, or as exempted in accordance with this Chapter, no licensee may transport ~~radioactive~~licensed material or deliver ~~radioactive~~licensed material to a carrier for transport.

B. – E. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2602 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2106 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1505. Exemptions

A. …

B. A licensee is exempt from all the requirements of this Chapter with respect to shipment or carriage of the following low-level materials:

1. natural material and ores containing naturally occurring radionuclides that are either in their natural state, or have only been processed for purposes other than for the extraction of the radionuclides, and which are not intended to be processed for use of these radionuclides, provided the activity concentration of the material does not exceed 10 times the applicable radionuclide activity concentration values specified in Table A-2 or Table A-3 of 10 CFR Part 71, Appendix A, incorporated by reference in LAC 33:XV.1599.A; ~~and~~

2. materials for which the activity concentration is not greater than the activity concentration values specified in Table A-2 or Table A-3 of 10 CFR Part 71, Appendix A, incorporated by reference in LAC 33:XV.1599.A, or for which the consignment activity is not greater than the limit for an exempt consignment found in Table A-2 or Table A-3 of 10 CFR Part 71, Appendix A, incorporated by reference in LAC 33:XV.1599.A; or

3. Non-radioactive solid objects with radioactive substances present on any surfaces in quantities not in excess of the levels cited in the definition of *contamination* in LAC 33:XV.1503.A.

C. – C.3. …

4. 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, and that the fissile material is distributed homogeneously and does not form a lattice arrangement within the package;

5. – 6. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, LR 31:55 (January 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2106 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1506. Deliberate Misconduct

~~NOTE: Former §1506 has been repealed.~~

A. – D.2. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:2107 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1508. General License: NRC Approved Packages

A. A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance (CoC), or other approval has been issued by the ~~department~~U.S. NRC.

B. This general license applies only to a licensee who~~:~~

~~1.~~ has a quality assurance program approved by the department as satisfying the provisions of ~~10 CFR Part 71, Subpart H;~~LAC 33.XV.1520.

C. Each licensee issued a general license under Subsection A of this Section shall:

~~2~~1. ~~has~~maintain a copy of the ~~specific license,~~ 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 prior to shipment;

~~3~~2. comply~~ies~~ with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of this Chapter; and

~~4~~3. ~~prior to the licensee's first use of the package, has registered with the U.S. NRC~~submit in writing before the first use of the package to: ATTN: Document Control Desk, Director, Division of Spent Fuel Storage and Transportation, Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in 10 CFR 71.1(a), the licensee's name and license number and the package identification number specified in the package approval.

~~C~~D. The general license in this Section applies only when the package approval authorizes use of the package under this general license.

~~D~~E. For a Type B or fissile material package, the design of which was approved by the U.S. NRC before April 1, 1996, the general license is subject to additional restrictions of 10 CFR 71.19.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1267 (June 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2107 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1509. ~~General License: DOT Specification Container~~

~~[Formerly §1510]~~Repealed.

~~NOTE: Former §1509 has been repealed.~~

~~A. A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a specification container for fissile material or for a Type B quantity of radioactive material as specified in the regulations of the U.S. DOT at 49 CFR Parts 173 and 178.~~

~~B. This general license applies only to a licensee who has a quality assurance program approved by the U.S. NRC as satisfying the provisions of 10 CFR Part 71, Subpart H.~~

~~C. This general license applies only to a licensee who:~~

~~1. has a copy of the specification; and~~

~~2. complies with the terms and conditions of the specification and the applicable requirements of this Chapter and of 10 CFR Part 71, Subparts A, G, and H.~~

~~D. This general license is subject to the limitation that the specification container may not be used for a shipment to a location outside the United States, except by multilateral approval, as defined in U.S. DOT regulations at 49 CFR 173.403.~~

~~E. This Section expires October 1, 2008.~~

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1267 (June 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2107 (October 2008), repealed by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1510. General License: Use of Foreign Approved Package

~~**[Formerly §1511]**~~

~~NOTE: Former §1510 has moved to §1509.~~

A. A general license is issued to any licensee of the department to transport, or to deliver to a carrier for transport, licensed material in a package the design of which has been approved in a foreign national competent authority certificate that has been revalidated by the U.S. DOT as meeting the applicable requirements of 49 CFR 171.~~1~~23.

B. Except as otherwise provided in this Section, the general license applies only to a licensee who has a quality assurance program approved by the ~~U.S. NRC~~department as satisfying the applicable provisions of ~~10 CFR Part 71, Subpart H~~LAC 33.XV.1520.

C. – D.1. …

2. complies with the terms and conditions of the certificate and revalidation and with the applicable requirements of this Chapter and of 10 CFR Part 71, Subparts A, G, and H. ~~With respect to the quality assurance provisions of 10 CFR Part 71, Subpart H, the licensee is exempt from design, construction, and fabrication considerations.~~

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1268 (June 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2108 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1511. General License: Fissile Material

~~NOTE: Former §1511 has moved to §1510.~~

A. …

B. The general license applies only to a licensee who has a quality assurance program approved by the ~~U.S. NRC~~department as satisfying the provisions of 10 CFR Part 71, Subpart H.

C. – Table 2. …

* * *

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:2108 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1512. General License: Plutonium-Beryllium Special Form Material

~~NOTE: Former §1512 has moved to §1515 and §1516.~~

A. …

B. The general license applies only to a licensee who has a quality assurance program approved by the ~~U.S. NRC~~department as satisfying the provisions of 10 CFR Part 71, Subpart H.

C. – E.2. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:2109 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1513. External Radiation Standards for All Packages

~~NOTE: Former §1513 has moved to §1517.~~

A. – D. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:2109 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1514. Assumptions as to Unknown Properties

~~NOTE: Former §1514 has been repealed.~~

A. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:2110 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1515. ~~Preliminary Determinations~~Records

~~[Formerly §1512.A]~~

~~NOTE: Former §1515 has been repealed.~~

~~A. Before the first use of any packaging for the shipment of licensed material, the licensee shall:~~

~~1. 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^2) gauge, test the containment system at an internal pressure at least 50 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. conspicuously and durably mark the packaging with its model number, serial number, gross weight, and a package identification number assigned by the U.S. 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. NRC.~~

A. Each licensee shall maintain, for a period of three years after shipment, a record of each shipment of licensed material not exempt under 10 CFR 71.14, showing where applicable:

1. identification of the packaging by model number and serial number;

2. verification that there are no significant defects in the packaging, as shipped;

3. volume and identification of coolant;

4. type and quantity of licensed material in each package, and the total quantity of each shipment;

5. for each item of irradiated fissile material:

a. identification by model number and serial number;

b. irradiation and decay history to the extent appropriate to demonstrate that its nuclear and thermal characteristics comply with license conditions; and

c. any abnormal or unusual condition relevant to radiation safety;

6. date of the shipment;

7. for fissile packages and for Type B packages, any special controls exercised;

8. name and address of the transferee;

9. address to which the shipment was made; and

10. results of the determinations required by 10 CFR 71.87 and by the conditions of the package approval.

B. The licensee shall make available to the department for inspection, upon reasonable notice, all records required by this Section. Records are only valid if stamped, initialed, or signed and dated by authorized personnel, or otherwise authenticated.

C. The licensee shall maintain sufficient written records to furnish evidence of the quality of packaging. These records shall be maintained for three years after the life of the packaging to which they apply. The records to be maintained include:

1. results of the determinations required by 10 CFR 71.85;

2. design, fabrication, and assembly records;

3. results of reviews, inspections, tests, and audits;

4. results of monitoring work performance and materials analyses; and

5. results of maintenance, modification, and repair activities. Inspection, test, and audit records shall identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1516. Preliminary and Routine Determinations

~~**[Formerly §1512.B]**~~

~~NOTE: Former §1516 has moved to §1519.~~

A. The licensee shall ascertain that the determinations in 10 CFR 71.85(a) – (c) have been made.

~~A~~B. Prior to 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 verify 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 design requirements specified in 10 CFR 71.45;

9. the level of non-fixed (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 U.S. DOT regulations at 49 CFR 173.443;

10. external radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in LAC 33:XV.1513 at any time during transportation; and

11. accessible package surface temperatures shall not exceed the limits specified in 10 CFR 71.43(g) at any time during transportation.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1268 (June 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2110 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1517. Air Transport of Plutonium

~~**[Formerly §1513]**~~

~~NOTE: Former §1517 has moved to §1599.A.~~

A. – C. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1268 (June 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 34:2110 (October 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1519. Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste

~~**[Formerly §1516]**~~

A. – F. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1269 (June 2000), LR 26:2602 (November 2000), amended by the Office of Environmental Assessment, LR 30:2029 (September 2004), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2537 (October 2005), LR 33:2190 (October 2007), LR 34:2111 (October 2008), amended by the Office of the Secretary, Legal Division, LR 40:1928 (October 2014), LR 41:2325 (November 2015), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 44:2137 (December 2018), LR 45:

§1520. Quality Assurance

A. Quality Assurance Requirements

1. This Section describes quality assurance requirements applying 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 Section, "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 in accordance with predetermined requirements. ~~The licensee, certificate holder, and applicant for a CoC are responsible for the quality assurance requirements as they apply to design, fabrication, testing, and modification of packaging.~~ Each licensee is responsible for satisfying the quality assurance ~~provision~~requirements that appl~~ies~~y to its use of a packaging for the shipment of licensed material subject to ~~the quality assurance requirements of~~ this Section.

2. Each licensee~~, certificate holder, and applicant for a CoC~~ shall establish, maintain, and execute a quality assurance program that satisfies each of the applicable criteria of this Section and that satisfies any specific provisions that are applicable to the licensee's activities, including procurement of packaging. The licensee~~, certificate holder, and applicant for a CoC~~ 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. Before using any package for the shipment of licensed material subject to this Section, each licensee shall obtain ~~U.S. NRC~~department approval of its quality assurance program. Using an appropriate method listed in 10 CFR 71.1(a), each licensee shall file a description of its quality assurance program, including a discussion of which requirements of this

Section are applicable and how they will be satisfied, by submitting the description to the ~~Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Washington, DC 20555~~Office of Environmental Compliance.

~~4. A U.S. NRC approved quality assurance program that satisfies the applicable criteria of 10 CFR Part 71, Subpart H, 10 CFR Part 50, Appendix B, or 10 CFR Part 72, Subpart G, and that is established, maintained, and executed regarding transport packages, will be accepted as satisfying the requirements of Paragraph A.2 of this Section. Before first use, the licensee, certificate holder, and applicant for a CoC shall notify the U.S. NRC, in accordance with 10 CFR 71.1, of its intent to apply its previously-approved Subpart H, Appendix B, or Subpart G quality assurance program to transportation activities. The licensee, certificate holder, and applicant for a CoC shall identify the program by date of submittal to the U.S. NRC, Docket Number, and date of U.S. NRC approval.~~

4~~5~~. 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 LAC 33:XV.547.B, is deemed to satisfy the requirements of LAC 33:XV.150~~7~~8.B and Paragraph A.2 of this Section.

B. Quality Assurance Organization

1. The licensee~~ (or anyone who designs, fabricates, assembles, and tests the package before the package approval is issued), certificate holder, and applicant for a CoC~~ shall be responsible for the establishment and execution of the quality assurance program. The licensee~~, certificate holder, and applicant for a CoC~~ may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or

~~delegatable~~any part of the quality assurance program, but shall retain responsibility for the program. These activities include performing the functions associated with attaining quality objectives and the quality assurance functions.

2. …

3. The persons ~~or~~and organizations performing quality assurance functions ~~must be given~~shall have sufficient authority and organizational freedom to:

a. – c. …

4. ~~A~~The persons ~~or~~and organizations performing quality assurance functions ~~must~~shall report to a management level that assures that the required authority and organizational freedom, including sufficient independence from cost and schedule factors, when opposed to safety considerations, are provided.

5. …

6. Irrespective of the organizational structure, any individual assigned the responsibility for assuring effective execution of any portion of the quality assurance program, at any location where activities subject to this Section are being performed, ~~must~~shall have direct access to the levels of management necessary to perform this function.

C. Quality Assurance Program

1. The licensee~~, certificate holder, and applicant for a CoC~~ 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 this Section. The licensee~~, certificate holder, and applicant for a CoC~~ 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 CoC~~ 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 CoC,~~ through ~~a~~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 CoC~~ 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 CoC~~ 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 CoC~~ shall base the requirements and procedures of ~~the~~its quality assurance program on the following considerations concerning the complexity and proposed use of the package and its components:

a. – b. …

c. the need for special controls ~~of,~~ and surveillance over~~,~~ processes and equipment;

d. – e. …

4. The licensee~~, certificate holder, and applicant for a CoC~~ 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 CoC~~ 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.

D. Handling, Storage, and Shipping Control. The licensee~~, certificate holder, and applicant for a CoC~~ shall establish measures to control, in accordance with instructions, the handling, storage, shipping, cleaning, and preservation of materials and equipment to be used in packaging to prevent damage or deterioration. When necessary for particular products, special protective environments, such as an inert gas atmosphere and specific moisture content and temperature levels, ~~must~~shall be specified and provided.

E. Inspection, Test, and Operating Status

1. The licensee~~, certificate holder, and applicant for a CoC~~ shall establish measures to indicate, by the use of markings such as stamps, tags, labels, or routing cards, or by other suitable means, the status of inspections and tests performed upon individual items of the packaging. These measures ~~must~~shall provide for the identification of items that have satisfactorily passed required inspections and tests, where necessary, to preclude inadvertent bypassing of the inspections and tests.

2. …

F. Nonconforming Materials, Parts, or Components. The licensee~~, certificate holder, and applicant for a CoC~~ shall establish measures to control materials, parts, or components that

do not conform to the licensee's requirements in order to prevent their inadvertent use or installation. These measures ~~must~~shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items ~~must~~shall be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures.

G. Corrective Action. The licensee~~, certificate holder, and applicant for a CoC~~ shall establish measures to assure that conditions adverse to quality, such as deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition adverse to quality, the measures ~~must~~shall assure that the cause of the condition is determined and corrective action is taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken ~~must~~shall be documented and reported to appropriate levels of management.

H. Quality Assurance Records. The licensee~~, certificate holder, and applicant for a CoC~~ shall maintain sufficient written records to describe the activities affecting quality. These records ~~must~~shall include changes to the quality assurance program as required by Subsection J of this Section, the instructions, procedures, and drawings required by 10 CFR 71.111 to prescribe quality assurance activities and ~~must~~shall include closely related specifications such as required qualifications of personnel, procedures, and equipment. The records ~~must~~shall include instructions or procedures that 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 CoC~~ shall retain these records for three years beyond the date when the licensee~~, certificate holder, and applicant for a CoC~~ last

engaged in the activity for which the quality assurance program was developed. If any portion of the quality assurance program, written procedures or instructions is superseded, the licensee~~, certificate holder, and applicant for a CoC~~ shall retain the superseded material for three years after it is superseded.

I. Audits. The licensee~~, certificate holder, and applicant for a CoC~~ shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits ~~must~~shall be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audited results ~~must~~shall be documented and reviewed by management having responsibility in the area audited. Follow-up action, including re-audit of deficient areas, ~~must~~shall be taken where indicated.

J. Changes to Quality Assurance Program

1. Each licensee shall submit, in accordance with 10 CFR 71.1(a), a description of a proposed change to its department-approved quality assurance program that will reduce commitments in the program description as approved by the department. The licensee shall not implement the change before receiving department approval.

a. The description of a proposed change to the department-approved quality assurance program shall identify the change, the reason for the change, and the basis for concluding that the revised program incorporating the change continues to satisfy the applicable requirements of this Section.

b. Reserved

2. Each licensee may change a previously approved quality assurance program without prior department approval, if the change does not reduce the commitments in

the quality assurance program previously approved by the department. Changes to the quality assurance program that do not reduce the commitments shall be submitted to the department every 24 months, in accordance with 10 CFR 71.1(a). In addition to quality assurance program changes involving administrative improvements and clarifications, spelling corrections, and non-substantive changes to punctuation or editorial items, the following changes are not considered reductions in commitment:

a. the use of a quality assurance standard approved by the department that is more recent than the quality assurance standard in the licensee's current quality assurance program at the time of the change;

b. the use of generic organizational position titles that clearly denote the position function, supplemented as necessary by descriptive text, rather than specific titles, provided that there is no substantive change to either the functions of the position or reporting responsibilities;

c. the use of generic organizational charts to indicate functional relationships, authorities, and responsibilities, or alternatively, the use of descriptive text, provided that there is no substantive change to the functional relationships, authorities, or responsibilities;

d. the elimination of quality assurance program information that duplicates language in quality assurance regulatory guides and quality assurance standards to which the licensee has committed to on record; and

e. organizational revisions that ensure that persons and organizations performing quality assurance functions continue to have the requisite authority and

organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations.

3. Each licensee shall maintain records of quality assurance program changes.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of the Secretary, Legal Affairs Division, LR 34:2112 (October 2008), repromulgated LR 34:2393 (November 2008), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45:

§1599. Appendix—Incorporation by Reference of 10 CFR Part 71, Appendix A, Tables A-1, A-2, A-3, and A-4; Procedures for Determining A_1 and A_2

~~**[Formerly §1517]**~~

A. Tables A-1, A-2, A-3, and A-4 in 10 CFR Part 71, Appendix A, July ~~6~~13, 201~~2~~5, are hereby incorporated by reference. These tables are used to determine the values of A_1 and A_2, as described in Subsections B-F of this Section.

B. – D. …

E. For mixtures of radionuclides whose identities and respective activities are known, the following conditions apply.

1. For special form radioactive material, the maximum quantity that may be transported in a Type A package is as follows.

$$\sum_{1} \frac{B(i)}{A_1(i)} \leq 1$$

where:

B(i) = the activity of radionuclide ~~I~~i in special form

$A_1(i)$ = the A_1 value for radionuclide ~~I~~i

2. For normal form radioactive material, the maximum quantity that may be transported in a Type A package is as follows.

$$\Sigma B(i)/A_2(i) \leq 1$$

where:

B(i) = the activity of radionuclide i in normal form

A~~2~~$_2$(i) = the A~~2~~$_2$ value for radionuclide i

3. If the package contains both special and normal form radioactive material, the activity that may be transported in a Type A package is as follows:

$$\sum_i \frac{B(i)}{A_1(i)} + \sum_j \frac{C(j)}{A_2(j)} \leq 1$$

where:

B(i) = the activity of radionuclide i as special form radioactive material

A_1(i) = the A_1 value for radionuclide i

C(j) = the activity of radionuclide j as normal form radioactive material

A_2(j) = the A_2 value for radionuclide j.

4. Alternatively, the A_1 value for mixtures of special form material may be determined as follows.

$$A_1 \text{ for mixture} = \frac{1}{\sum_i \frac{f(i)}{A_1(i)}}$$

where:

f(i) = the fraction of activity for radionuclide ~~I~~i in the mixture

A_1(i) = the appropriate A_1 value for radionuclide ~~I~~i

~~4~~5. Alternatively, the A_2 value for mixtures of normal form material may be determined as follows.

$$A_2 \text{ for mixture} = \frac{1}{\sum_i \frac{f(i)}{A_2(i)}}$$

where:

f(i) = the fraction of activity for radionuclide ~~I~~i in the mixture

$A_2(i)$ = the appropriate A_2 value for radionuclide ~~I~~i

~~5~~6. 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) = the fraction of activity concentration of radionuclide ~~I~~i in the mixture

[A] = the activity concentration for exempt material containing radionuclide ~~I~~i

~~6~~7. 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) = the fraction of activity of radionuclide ~~I~~i in the mixture

A(i) = the activity limit for exempt consignments for radionuclide ~~I~~i

F. 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 A_1 or

A_2 value, as appropriate, for the radionuclides in each group may be used in applying the formulas in Subsection E. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest A_1 or A_2 values for the alpha emitters and beta/gamma emitters. 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 [A] (activity concentration for exempt material) or A (activity limit for exempt consignment) value, as appropriate, for the radionuclides in each group may be used in applying the formulas in Subsection E 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 [A] or A values for the alpha emitters and beta/gamma emitters, respectively.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2104(B) and 2113.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 26:1270 (June 2000), amended LR 27:2233 (December 2001), LR 28:997 (May 2002), LR 29:701 (May 2003), LR 30:752 (April 2004), amended by the Office of Environmental Assessment, LR 31:920 (April 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:604 (April 2006), LR 33:641 (April 2007), LR 34:867 (May 2008), LR 34:2114 (October 2008), LR 35:1110 (June 2009), LR 36:2275 (October 2010), amended by the Office of the Secretary, Legal Division, LR 38:2748 (November 2012), LR 40:1929 (October 2014), amended by the Office of the Secretary, Legal Affairs and Criminal Investigations Division, LR 45: