SECRETARY

### State of Louisiana

## **OFFICE OF ENVIRONMENTAL COMPLIANCE**March 14, 2014

Pamela J. Henderson, Deputy Director Division of Materials Safety and State Materials and Environmental Management Programs U.S. Nuclear Regulatory Commission Washington, D.C. 20555-0001

#### Dear Ms Henderson:

Enclosed is a copy of the proposed revisions to the Louisiana Department of Environmental Quality rules in the Louisiana Administrative Code, Title 33, Part XV, Radiation Protection. The proposed regulation is identified by strikeout/underline and corresponds to the following equivalent amendments to NRC's regulations.

RATS ID 2011-2	<u>Title</u> Licenses, Certifications, and Approvals for Materials Licensees	State Section 326.A.1 & 326.C.1
2012-1	Change of Compatibility of 10 CFR 31.5	322.D.1-4 & 390.B
2012-2	and 31.6 Advance Notification to Native American	102.Definitions, 1519.A,
	Tribes of Transportation of Certain Types of Nuclear Waste	1519.A.1, 1519.C.1, 1519.C.3, 1519.D.4,
2012-3	Technical Corrections – Parts 30, 34, 40, & 71	1519.E, & 1519.F 331.E.2, 550.A.1, & 1599.A

We believe that adoption of these revisions satisfies the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-200. This proposed rule has not yet been submitted to the Louisiana Register for publication.

If you have any questions, please feel free to contact me at (225) 219-3634 or Joe Noble of my staff at (225) 219-3643 or joe.noble@la.gov.

Sincerely, Judith a. Schuerman

Judith A. Schuerman, Ph.D.

Environmental Scientist Manager

Assessment Division/Radiation Section

#### Title 33

#### **ENVIRONMENTAL QUALITY**

#### Part XV. Radiation Protection

#### **Chapter 1. General Provisions**

#### §102. Definitions and Abbreviations

As used in these regulations, these terms have the definitions set forth below. Additional definitions used only in a certain chapter may be found in that Chapter.

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Indian tribe—an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a.

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<u>Tribal official</u>—the highest ranking individual that represents tribal leadership, such as the chief, president, or tribal council leadership.

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AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and 2104.B. HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 18:34 (January 1992), LR 19:1421 (November 1993), LR 20:650 (June 1994), LR 22:967 (October 1996), LR 24:2089 (November 1998), repromulgated LR 24:2242 (December 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2563 (November 2000), LR 26:2767 (December 2000), LR 30:1171, 1188 (June 2004), amended by the Office of Environmental Assessment, LR 31:44 (January 2005), LR 31:1064 (May 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 32:811 (May 2006), LR 32:1853 (October 2006), LR 33:1016 (June 2007), LR 33:2175 (October 2007), LR 34:982 (June 2008), LR 36:1771 (August 2010), amended by the Office of the Secretary, Legal Division, LR 38:2748 (November 2012), LR 40:\*\*.

#### **Chapter 3. Licensing of Radioactive Material**

Subchapter D. Specific Licenses

§325. General Requirements for the Issuance of Specific Licenses

A. ...

1. the applicant is <u>adequately</u> qualified <u>by training</u> and experienced to use the material in question for the purpose requested in accordance with these regulations in such a manner as to <u>protect health</u> <u>and minimize danger to <u>lifepublic welfare and safety</u> or property;</u>

- 2. the applicant's proposed equipment, facilities, and procedures are adequate to <u>protect</u> health and minimize danger to <u>lifepublic welfare and safety</u> or property;
- 3. the issuance of the license will not be inimical to the welfare and safety of the public; and application is for a purpose authorized by these regulations;
- 4. the applicant satisfies any applicable special requirements contained in LAC 33:XV.326, 327, 328, Chapters 5, 7, 13, 17, or 20-; and
- 5. upon a determination that an application meets the requirements of these regulations, the department shall issue a specific license authorizing the possession and use of byproduct material.

B. – D.8.d.iv. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and 2104.B. HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 18:34 (January 1992), LR 23:1140 (September 1997), LR 24:2091 (November 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:1017 (May 2000), LR 26:2568 (November 2000), LR 27:1227 (August 2001), amended by the Office of Environmental Assessment, LR 31:44 (January 2005), LR 31:1578 (July 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 33:2178 (October 2007), amended by the Office of the Secretary, Legal Division, LR 40:\*\*.

#### §326. Special Requirements for Issuance of Certain Specific Licenses for Radioactive Material

A. ...

the applicant shall satisfy the general requirements specified in LAC 33:XV. Chapter
 325.A.1-5 and the requirements contained in this Part;

 $2. - 2.e. \dots$ 

- 3. the application shall include an outline of the written operating and emergency procedures listed in LAC 33:XV.17357 that describes the radiation safety aspects of the procedures;
  - 4. ...

5. the application shall include a description of the access control systems required by LAC 33:XV.17135, the radiation monitors required by LAC 33:XV.17219, the method of detecting leaking sources required by LAC 33:XV.17413, including the sensitivity of the method, and a diagram of the facility that shows the locations of all required interlocks and radiation monitors;

- 6. if the applicant intends to perform leak testing of dry-source-storage sealed sources, the applicant shall establish procedures for performing leak testing of dry-source storage sealed sources and submit a description of these procedures to the department. The description shall include the:
  - a. methods of <u>performing the analysis</u><del>collecting the leak test samples</del>;
- b. <u>qualifications pertinent experience</u> of the individual who <u>analyzes collects</u> the samples; <u>and</u>
  - c. instruments to be used; and
  - d. methods of analyzing the samples;
  - 7. ...
- 8. the applicant shall describe the inspection and maintenance checks, including the frequency of the checks required by LAC 33:XV.17435.
  - B. ...
- C. Reserved. Specific Licenses for Well Logging. The department will approve an application for a specific license for the use of licensed material in well logging if the applicant meets the following requirements:
- 1. The applicant shall satisfy the general requirements specified in LAC 33:XV.325.A for byproduct material, and any special requirements contained in this Part.
- 2. The applicant shall develop a program for training logging supervisors and logging assistants and submit to the department a description of this program which specifies the:
  - a. initial training;
  - b. on-the-job training;

•
c. annual safety reviews provided by the licensee;
d. means the applicant will use to demonstrate the logging supervisor's
knowledge and understanding of and ability to comply with the department's regulations and licensing
requirements and the applicant's operating and emergency procedures; and
e. means the applicant will use to demonstrate the logging assistant's knowledge
and understanding of and ability to comply with the applicant's operating and emergency procedures.
3. The applicant shall submit to the department written operating and emergency
procedures as described in LAC 33:XV.2021 or an outline or summary of the procedures that includes the
important radiation safety aspects of the procedures.
4. The applicant shall establish and submit to the department its program for annual
inspections of the job performance of each logging supervisor to ensure that the department's regulations,
license requirements, and the applicant's operating and emergency procedures are followed. Inspection
records shall be retained for 3 years after each annual internal inspection.
5. The applicant shall submit a description of its overall organizational structure as it
applies to the radiation safety responsibilities in well logging, including specified delegations of authority
and responsibility.
6. If an applicant wants to perform leak testing of sealed sources, the applicant shall
identify the manufacturers and the model numbers of the leak test kits to be used. If the applicant wants to
analyze its own wipe samples, the applicant shall establish procedures to be followed and submit a
description of these procedures to the department. The description shall include the:

- a. instruments to be used;
- b. methods of performing the analysis; and
- c. pertinent experience of the person who will analyze the wipe samples.

D. – E.1.k. ...

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

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 18:34 (January 1992), LR 24:2092 (November 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2569 (November 2000), LR 27:1228 (August 2001), LR 30:1188 (June 2004), amended by the Office of Environmental Assessment, LR 31:45 (January 2005), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2525 (October 2005), LR 33:2178 (October 2007), LR 34:1027 (June 2008), amended by the Office of the Secretary, Legal Division, LR 40:\*\*.

#### §331. Specific Terms and Conditions of Licenses

A. – E.1. ...

- 2. an entity (as that term is defined in 11 U.S.C. 101(15)) controlling the licensee or listing the licensee as property of the estate; or
  - 3. an affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

F. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and 2104.B. HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Nuclear Energy Division, LR 13:569 (October 1987), amended by the Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 18:34 (January 1992), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2571 (November 2000), amended by the Office of the Secretary, Legal Affairs Division, LR 31:2527 (October 2005), LR 33:2180 (October 2007), amended by the Office of the Secretary, Legal Division, LR 40:\*\*.

#### Chapter 5. Radiation Safety Requirements for Industrial Radiographic Operations

#### Subchapter A. Equipment Control

#### §550. Performance Requirements for Radiography Equipment

A. ...

1. each radiographic exposure device and all associated equipment shall meet the requirements specified in American National Standard (ANSI) N432-1980 Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography, (published as NBS Handbook 136, issued January 1981). This publication has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a)and 1 CFR part 51. This publication may be purchased from the American National Standards Institute, Inc., 25 West 43rd Street, New York, New York 10036;

Telephone: (212) 642–4900. Copies of the document are available for inspection at the Nuclear Regulatory

Commission Library, 11545 Rockville Pike, Rockville, Maryland 20852. A copy of the document is also on

file at the National Archives and Records Administration (NARA). For information on the availability of this

material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal\_register/code\_of\_federal\_regulations/ibr\_locations.html. Engineering analyses may be submitted by an applicant or licensee to demonstrate the applicability of previously performed testing on similar individual radiography equipment components. Upon review, the department may find this an acceptable alternative to actual testing of the component in accordance with the referenced standard;

A.2 - 5...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and 2104.B. HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 20:653 (June 1994), amended LR 21:554 (June 1995), LR 23:1138 (September 1997), LR 24:2100 (November 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 26:2583 (November 2000), amended by the Office of the Secretary, Legal Division, LR 40:\*\*.

#### **Chapter 15. Transportation of Radioactive Material**

## §1519. Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste [Formerly §1516]

A. As specified in Subsections B, C, and D of this Section, each licensee shall provide advance notification to the governor, or to the governor's designee, of the shipment of licensed material.

withinthrough, or across the boundary of, Louisiana, before the transport, or delivery to a carrier for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage. A list of the names and mailing addresses of the governors' designees receiving advance notification of transportation of nuclear waste was published in the *Federal Register* on June 30, 1995 (60 FR 34306), and the list of governor's designees and tribal official's designees of participating tribes will be published annually in the *Federal Register* on or about June 30 to reflect any changes in the information. The list of the

names and mailing addresses of the governors' designees <u>and tribal official's designees of participating tribes</u> is also available on request from the Director, <u>Division of Intergovernmental Liaison and Rulemaking</u>, Office of <u>Federal and State Materials and Environmental Management Programs</u>, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Washington, DC 20555. In Louisiana, the governor's designee is the Louisiana State Police, 7919 Independence Boulevard, Box 66614 (#A2621), Baton Rouge, LA 70896–6614.

1. As specified in Subsections B, C, and D of this Section, after June 11, 2013, each licensee shall provide advance notification to the tribal official of participating tribes referenced in Subsection A of this Section, or the official's designee, of the shipment of licensed material, within or across the boundary of the tribe's reservation, before the transport, or delivery to a carrier for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.

B. – C. ...

1. The notification <u>mustshall</u> be made in writing to the <u>office of each appropriate</u> governor or to the governor's designee, the <u>office of each appropriate tribal official or tribal official's</u> designee, and to the Director, Division of <u>Nuclear-Security Policy</u>, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Washington, DC 20555.

2. ...

3. A notification delivered by any means other than mail <u>mustshall</u> reach the office of the governor or the governor's designee <u>or the tribal official or tribal official</u>'s <u>designee</u> at least four days before the beginning of the seven-day period during which departure of the shipment is estimated to occur.

C.4 - D.3. ...

4. the seven-day period during which arrival of the shipment at the boundary of the state or tribal reservation is estimated to occur;

5. – 6. ...

E. A licensee who finds that schedule information previously furnished to the governor or to the governor's designee or a tribal official or tribal official's designee, in accordance with this Section, will not

be met shall telephone a responsible individual in the office of the governor or of the governor's designee or the tribal official or tribal official's designee and inform that individual of the extent of the delay beyond the schedule originally reported. The licensee shall maintain a record of the name of the individual contacted for three years.

F. Each licensee who cancels an irradiated reactor fuel or nuclear waste shipment for which advance notification has been sent shall send a cancellation notice to the governor of each state or to the governor's designee previously notified, each tribal official or to the tribal official's designee previously notified, and to the Director, Division of Nuclear Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Washington, DC 20555. The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being canceled. The licensee shall retain a copy of the notice as a record for three years.

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:\*\*.

§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, June 13 ly 6, 2012, 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. – F. ...

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:\*\*.

#### Chapter 17. Licensing and Radiation Safety Requirements for Irradiators

#### §1731. Design Requirements

A. – F. ...

G. Access Control. For panoramic irradiators, the licensee shall verify from the design and logic diagram that the access control system shall meet the requirements of LAC 33:XV.171<u>5</u>7.

H. – L. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and 2104.B. HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 24:2116 (November 1998), amended by the Office of the Secretary, Legal Division, LR 40:\*\*.

#### §1733. Construction Monitoring and Acceptance Testing

A. – E. ...

F. Source Rack. For panoramic irradiators, the licensee shall test the movement of the source racks for proper operation prior to source loading; testing shall include source rack lowering due to simulated loss of power. For all irradiators with product conveyor systems, the licensee shall observe and test the operation of the conveyor system to assure that the requirements in LAC 33:XV.17279 are met for protection of the source rack and the mechanism that moves the rack; testing shall include tests of any limit switches and interlocks used to protect the source rack and mechanism that moves that rack from moving product carriers.

G. – L. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2001 et seq. and 2104.B. HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Air Quality and Radiation Protection, Radiation Protection Division, LR 24:2116 (November 1998), amended by the Office of the Secretary, Legal Division, LR 40:\*\*.

## Licenses, Certifications, and Approvals for Materials Licensees (76 FR 56951) RATS ID # 2011-2 Effective date 11/14/2011 Date Due for State Adoption 11/14/2014

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§ 30.4	Definition: Commencement of construction, Paragraph 1		D	In § 30.4, the definition for the term "commencement of construction" is revised as follows:			
				Commencement of construction means taking any action defined as "construction" or any other activity at the site of a facility subject to the regulations in this part that has a reasonable nexus to:  (1) Radiological health and safety; or			
§ 30.4	Definition Commencement of construction, Paragraph 2		NRC	In § 30.4, the definition for the term "commencement of construction" is revised as follows:  (2) Common defense and security.			
§ 30.4	Definition Construction, Paragraph 1-8, 9(i)		D	In § 30.4, the definition for the term "construction" is added in alphabetical order to read as follows:  Construction means the installation of foundations, or in-			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				place assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security. The term "construction" does not include: (1) Changes for temporary use of the land for public recreational purposes; (2) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values; (3) Preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas; (4) Erection of fences and other access control measures			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				that are not related to the safe use of, or security of, radiological materials subject to this part; (5) Excavation; (6) Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility; (7) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines); (8) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or (9) Taking any other action that has no reasonable nexus to: (i) Radiological health and safety, or .			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§ 30.4	Definition Construction, Paragraph 9(ii)		NRC	In § 30.4, the definition for the term "construction" is added in alphabetical order to read as follows:  (ii) Common defense and security.			
§ 30.33	General requirements for issuance of specific licenses.		D	In § 30.33, paragraph (a)(5) is revised.	N/A		
§ 36.2	Definition: Commencement of construction, Paragraph 1		D	In § 36.2, definitions for the terms "commencement of construction" is added in alphabetical order to read as follows:  Commencement of construction			
				means taking any action defined as "construction" or any other activity at the site of a facility subject to the regulations in this part that has a reasonable nexus to:  (1) Radiological health and safety; or			
§ 36.2	Definition Commencement of construction, Paragraph 2		NRC	In § 36.2, definitions for the terms "commencement of construction" is added in alphabetical order to read as			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				follows:			
				(2) Common defense and security.			
§ 36.2	Definition Construction, Paragraph 1-8, 9(i)		D	In § 36.2, definitions for the terms "construction" is added in alphabetical order to read as follows:  Construction means the installation of foundations, or inplace assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security. The term "construction" does not include:  (1) Changes for temporary use of the land for public recreational purposes;  (2) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the			
				protection of environmental			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				values; (3) Preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas; (4) Erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to this part; (5) Excavation; (6) Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility; (7) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines); (8) Procurement or fabrication			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or (9) Taking any other action that has no reasonable nexus to: (i) Radiological health and safety, or .			
§ 36.2	Definition Construction, Paragraph 9(ii)		NRC	In § 36.2, definitions for the terms "construction" is added in alphabetical order to read as follows:  (ii) Common defense and security.			
§ 36.13(a)	Specific licenses for irradiators	326.A.1	H&S	In § 36.13, paragraph (a) is revised to read as follows:  *****  (a) The applicant shall satisfy the general requirements specified in §§ 30.33(a)(1)-(4) and 30.33(b) of this chapter and the requirements contained in this part.	Yes		Added language
§ 36.15	Commenceme nt of construction		D	N/A			
§ 39.13	Specific licenses for well logging.	326.C.1	H&S	In § 39.13, paragraph (a) is revised to read as follows:	Yes		Added language

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				(a) The applicant shall satisfy the general requirements specified in § 30.33 of this chapter for byproduct material, in § 40.32 of this chapter for source material, and in § 70.23 of this chapter for special nuclear material, as appropriate, and any special requirements contained in this part.			
§ 40.4	Definition: Commencement of construction, Paragraph 1		C - States with authority to regulate uranium mill activities (11e.(2) byproduct material)  D - States without authority	In § 40.4, the definition for the term "commencement of construction" is revised as follows:  Commencement of construction means taking any action defined as "construction" or any other activity at the site of a facility subject to the regulations in this part that has a reasonable nexus to:  (1) Radiological health and safety; or			
§ 40.4	Definition: Commencement of construction, Paragraph 2		NRC	In § 40.4, the definition for the term "commencement of construction" is revised as follows:  (2) Common defense and security.			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§ 40.4	Definition Construction, Paragraph 1-8, 9(i)		C - States with authority to regulate uranium mill activities (11e.(2) byproduct material)  D - States without authority	In § 40.4, the definition for the term "construction" is added in alphabetical order to read as follows:  Construction means the installation of foundations, or inplace assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security. The term "construction" does not include:  (1) Changes for temporary use of the land for public recreational purposes;  (2) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;  (3) Preparation of the site for construction of the facility, including clearing of the site,			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas;  (4) Erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to this part;  (5) Excavation;  (6) Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;  (7) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines);  (8) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				<ul><li>(9) Taking any other action that has no reasonable nexus to:</li><li>(i) Radiological health and safety, or .</li></ul>			
§ 40.4	Definition Construction, Paragraph 9(ii)		NRC	In § 40.4, the definition for the term "construction" is added in alphabetical order to read as follows:  (ii) Common defense and security.			
§ 40.32	General requirements for issuance of specific licenses		H&S - States with authority to regulate uranium mill activities (11e.(2) byproduct material)  NRC - States without authority	In § 40.32, paragraph (e) is revised to read as follows:  (e) In the case of an application for a license for a uranium enrichment facility, or for a license to possess and use source and byproduct material for uranium milling, production of uranium hexafluoride, or for the conduct of any other activity which the NRC determines will significantly affect the quality of the environment, the Director, Office of Federal and State Materials and Environmental Management Programs or his/her designee, before commencement of construction, on the basis of information filed and			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				evaluations made pursuant to subpart A of part 51 of this chapter, has concluded, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to this conclusion is grounds for denial of a license to possess and use source and byproduct material in the plant or facility. Commencement of construction as defined in section 40.4 may include nonconstruction activities if the activity has a reasonable nexus to radiological safety and security.			
§ 70.4	Definition: Commencement of construction, Paragraph 1		D	In § 70.4, the definition for the term "commencement of construction" is revised as follows:  Commencement of construction means taking any action defined as "construction" or any other activity at the site of a			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				facility subject to the regulations in this part that has a reasonable nexus to: (1) Radiological health and safety; or			
§ 70.4	Definition: Commencement of construction, Paragraph 2		NRC	In § 70.4, the definition for the term "commencement of construction" is revised as follows:  (2) Common defense and security.			
§ 70.4	Definition Construction, Paragraph 1-8, 9(i)		D	In § 70.4, the definition for the term "construction" is added in alphabetical order to read as follows:  Construction means the installation of foundations, or inplace assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security. The term "construction" does not include:  (1) Changes for temporary use of the land for public recreational purposes;  (2) Site exploration, including necessary borings to determine			

Change to NRC Section	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
			foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;  (3) Preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas;  (4) Erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to this part;  (5) Excavation;  (6) Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§ 70.4	Definition Construction,		NRC	(7) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines); (8) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or (9) Taking any other action that has no reasonable nexus to: (i) Radiological health and safety, or .  In § 70.4, the definition for the term "construction" is			
	Paragraph 9(ii)			added in alphabetical order to read as follows:  (ii) Common defense and security.			
§ 70.23	Requirements for the approval of applications		NRC	In § 70.23, paragraph (a)(7) is revised to read as follows:  (a) ***  (7) Where the proposed activity is processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, uranium enrichment facility construction			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				and operation, or any other activity which the NRC determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his/her designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to subpart A of part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to this conclusion is grounds for denial to possess and use special nuclear material in the plant or facility. Commencement of construction as defined in section 70.4 may include non-construction activities if the activity has a reasonable nexus to			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				radiological safety and security.			
§ 150.31 (b)(3)(iv)	Requirements for Agreement State regulation of byproduct material.		C - States with authority to regulate uranium mill activities (11e.(2) byproduct material)  NRC - States without authority	In § 150.31, paragraph (b)(3)(iv) is revised to read as follows:  (b) *** (iv) Prohibit commencement of construction with respect to such material prior to complying with the provisions of paragraph (b)(3)(C)(iii) of this section. As used in this paragraph:  (A) The term commencement of construction means taking any action defined as "construction" or any other activity at the site of a facility subject to the regulations in this part that has a reasonable nexus to radiological health and safety.  (B) The term construction means the installation of foundations, or inplace assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				have a reasonable nexus to			
				radiological safety or security.			
				The term "construction" does			
				not include:			
				(1) Changes for			
				temporary use of the land for			
				public recreational purposes; (2) Site exploration,			
				including necessary borings to			
				determine foundation			
				conditions or other			
				preconstruction monitoring to			
				establish background			
				information related to the			
				suitability of the site, the			
				environmental impacts of			
				construction or operation, or the			
				protection of environmental			
				values;			
				(3) Preparation of			
				the site for construction of the			
				facility, including clearing of the			
				site, grading, installation of			
				drainage, erosion and other			
				environmental mitigation measures, and construction of			
				temporary roads and borrow			
				areas;			
				(4) Erection of			
				fences and other access control			
				measures that are not related			
				to the safe use of or security of			
				radiological materials subject to			
				this part;			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
				(5) Excavation; (6) Erection of support buildings (e.g., construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;  (7) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines);  (8) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility; or  (9) Taking any other action which has no reasonable nexus to radiological health and safety.			

# Change of Compatibility of 10 CFR 31.5 and 31.6 in the Withdrawal of Proposed Rule and Closure of Petition For Rulemaking: Organization of Agreement States and Florida Department of Health, Bureau of Radiation Control (77 FR 3640, Published January 25, 2012) RATS ID: 2012-1 Effective: 1/25/2012

**Date Due for State Adoption 1/25/2015** 

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
'31.5	Certain detecting, measuring, gauging, or controlling devices and certain devices for producing light or an ionized atmosphere	322.D.1- 4	C***  (***please note 10 CFR 31.5 was changed from Compatibility Category B to Compatibility Category C)	NO TEXT CHANGE TO 10 CFR 31.5.  Text for 10CFR 31.5 can be found in Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material, (65 FR 79162, Published December 18, 2000) RATS ID: 2001-1, Effective: 2/16/01.	Yes		In Final Rule RP055ft published 2/20/14 in Louisiana Register. Added and deleted language to maintain compatibility
'31.6	General license to install devices generally licensed in ' 31.5	390.B	C***  (***please note 10 CFR 31.6 was changed from Compatibility Category B to Compatibility Category C)	NO TEXT CHANGE TO 10 CFR 31.6.  Text for 10CFR 31.6 can be found in Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material, (65 FR 79162, Published December 18, 2000) RATS ID: 2001-1, Effective: 2/16/01.	No		

## Advance Notification to Native American tribes of Transportation of Certain Types of Nuclear Waste (77 FR 34194, Published June 11, 2012) RATS ID: 2012-2 Effective: August 10, 2012 Date Due for State Adoption August 10, 2015

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
'71.4	Definition: Indian tribe	102	В	In § 71.4, the new definition for the term "Indian tribe" was added as follows:  Indian tribe means an Indian or Alaska native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a.	Yes		Added definition
'71.4	Definition: Tribal official	102	В	In § 71.4, the new definition for the term "Tribal official" was added as follows:  Tribal official means the highest ranking individual that represents Tribal leadership, such as the Chief, President, or Tribal Council leadership.	Yes		Added definition

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§71.97(a)	Advance notification of shipment of	4540.0	В	In § 71.97, paragraph (a) is revised to read as follows:	Na		Channed
	irradiated reactor fuel and nuclear waste	1519.A		(a)(1) As specified in paragraphs (b), (c), and (d) of this section, each licensee shall provide advance notification to the governor of a State, or the governor's designee, of the shipment of licensed material, within or across the boundary of the State, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.	No		Changed 'through' to 'within'
		1519.A.1		(2) As specified in paragraphs (b), (c), and (d) of this section, after June 11,2013, each licensee shall provide advance notification to the Tribal official of participating Tribes referenced in paragraph (c)(3)(iii) of this section, or the official's designee, of the shipment of licensed material, within or across the boundary of the Tribe's reservation, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.	Yes		Added language

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§71.97(c)(1)	Advance notification of shipment of irradiated reactor fuel and nuclear waste	1519.C.1	В	In § 71.97, paragraph (c)(1) is revised to read as follows:  (c) Procedures for submitting advance notification.  (1) The notification must be made in writing to:  (i) The office of each appropriate governor or governor's designee;  (ii) The office of each appropriate Tribal official or Tribal official's designee; and  (iii) The Director, Division of Security Policy, Office of Nuclear Security and Incident Response.	Yes		Added tribal references
§71.97(c)(3)	Advance notification of shipment of irradiated reactor fuel and nuclear waste	1519.C.3	В	In § 71.97, paragraph (c)(3) is revised to read as follows:  (c) * * *  (3) A notification delivered by any other means than mail must reach the office of the governor or of the governor's designee or the Tribal official or Tribal official's designee at least 4 days before the beginning of	Yes		Added tribal references

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
		1519.A		the 7-day period during which departure of the shipment is estimated to occur.  (i) A list of the names and mailing addresses of the governors' designees receiving advance notification of transportation of nuclear waste was published in the <i>Federal Register</i> on June 30, 1995 (60 FR 34306).	Yes		Added tribal references
		1519.A		(ii) The list of governor's designees and Tribal official's designees of participating Tribes will be published annually in the <i>Federal Register</i> on or about June 30 <sup>th</sup> to reflect any changes in information.	Yes		Added tribal references
		1519.A		(iii) A list of the names and mailing addresses of the governors' designees and Tribal officials' designees of participating Tribes is available on request from the Director, Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.	Yes		Added tribal references

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§71.97(d)(4)	Advance notification of shipment of irradiated reactor fuel and nuclear waste	1519.D.4	В	In § 71.97, paragraph (d)(4) is revised to read as follows:  (d) * * *  (4) The 7-day period during which arrival of the shipment at State boundaries or Tribal reservation boundaries is estimated to occur;	Yes		Added tribal references
§71.97(e)	Advance notification of shipment of irradiated reactor fuel and nuclear waste	1519.E	В	In § 71.97, paragraph (e) is revised to read as follows:  (e) Revision notice. A licensee who finds that schedule information previously furnished to a governor or governor's designee or a Tribal official or Tribal official's designee, in accordance with this section, will not be met, shall telephone a responsible individual in the office of the governor of the State or of the governor's designee or the Tribal official or the Tribal official's designee and inform that individual of the extent of the delay beyond the schedule originally reported. The licensee shall maintain a record of the name of the individual contacted for 3 years.	Yes		Added tribal references

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§71.97(f)(1)	Advance notification of shipment of irradiated reactor fuel and nuclear waste	1519.F	В	In § 71.97, paragraph (f)(1) is revised to read as follows:  (f) Cancellation notice. (1) Each licensee who can cancels an irradiated reactor fuel or nuclear waste shipment for which advance notification has been sent shall send a cancellation notice to the governor of each State or to the governor's designee previously notified, each Tribal official or to the Tribal official's designee previously notified, and the Director, Division of Security Policy, Office of Nuclear Security and Incident Response.	Yes		Added tribal references
§ 73.2	Definition: Indian tribe		NRC	In § 73.2, the new definition for the term "Indian tribe" was added:			
§ 73.2	Definition: Tribal official		NRC	In § 73.2, the new definition for the term "Tribal official" was added:			

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§ 73.21	Protection of Safeguards Information: Performance Requirements.		NRC	In § 73.21, paragraph (a)(2) is revised:			
§ 73.37	Requirements for physical protection of irradiated reactor fuel in transit		NRC	In § 73.37, paragraphs (f) and (g) are revised:			
§ 73.59	Relief from fingerprinting, identification and criminal history records checks and other elements of background checks for designated categories of individuals		NRC	In § 73.59, new paragraph (I) is added:			

#### Technical Corrections – Parts 30, 34, 40, and 71 (77 FR 39899, Published July 6, 2012) RATS ID: 2012-3 Effective: August 6, 2012 Date Due for State Adoption August 6, 2015

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
'30.34(h)(1)(ii)	Terms and conditions of licenses	331.E.2	H&S	In §30.34, paragraph (h)(1)(ii) was revised to remove the reference "11 U.S.C. 101(14)" and add, in its place, the reference "11 U.S.C. 101(15)."  (ii) An entity (as that term is defined in 11 U.S.C. 101(15)) controlling the licensee or listing the license or licensee as property of the estate; or	Yes		Added language
'34.20(a)(1)	Performance requirements for industrial radiography equipment	550.A.1	В	In §34.20(a)(1), the address for the American National Standards Institute is updated as follows:  (a)(1) * * * This publication may be purchased from the American National Standards Institute, Inc., 25 West 43 <sup>rd</sup> Street, New York, New York 10036; Telephone: (212) 642–4900. * * *	Yes		Added language

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
Part 40, Appendix A, section I, Criterion 4(d)	Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings for Wastes Produced by the Extraction or Concentration of Source material from ores processed primarily for their Source Material Content	N/A	С	The eight paragraph of Criterion 4(d) is revised to read as follows:  Criterion 4. * * * (d) *** Rock covering of slopes may be unnecessary where top covers are very thick (on the order of 10 m or greater); impoundment slopes are very gentle (on the order of 10 h:1v or less); bulk cover materials have inherently favorable erosion resistance characteristics; and, there is negligible drainage catchment area upstream of the pile and good wind protection as described in points (a) and (b) of this Criterion.			N/A – LA has no Uranium mills. This is not a perform- ance indicator considered under IMPEP.

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
Part 40, Appendix A, section I, Criterion 8A	Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings for Wastes Produced by the Extraction or Concentration of Source material from ores processed primarily for their Source Material Content	N/A	C	The third sentence of Criterion 8A is revised to read as follows:  Criterion 8A. * * * The appropriate NRC regional office as indicated in appendix D to 10 CFR part 20 of this chapter, or the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, must be immediately notified of any failure in a tailings or waste retention system that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that if not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.			N/A – LA has no Uranium mills. This is not a perform- ance indicator considered under IMPEP.

Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
Part 71, Appendix A, Table A-1	Packaging and Transportation of Radioactive Material, A <sub>1</sub> and A <sub>2</sub> Values for Radionuclides	1599.A	[B]	In Table A-1, the entries for Bi-205, Cm-248, Eu-150 (long lived), and Te-132(a) and footnote b were revised to read as follows:  See the table at the end of the document.	Yes		Changed date of incorpor- ated by reference

Table A-1—A<sub>1</sub> and A<sub>2</sub> VALUES FOR RADIONUCLIDES

Symbol of	Element and					Specific a	ctivity
radionuclide	atomic number	A <sub>1</sub> (TBq)	A <sub>1</sub> (Ci) <sup>b</sup>	A <sub>2</sub> (TBq)	A <sub>2</sub> (Ci) <sup>b</sup>	(TBq/g)	(Ci/g)
*	*	*	*	*	*	*	*
Bi-205	Bismuth (83)	7.0×10 <sup>-1</sup>	1.9×10 <sup>1</sup>	7.0×10 <sup>-1</sup>	1.9×10 <sup>1</sup>	1.5x10 <sup>3</sup>	4.2×10 <sup>4</sup>
*	*	*	*	*	*	*	*
Cm-248		2.0×10 <sup>-2</sup>	5.4×10 <sup>-1</sup>	3.0×10 <sup>-4</sup>	8.1×10 <sup>-3</sup>	1.6x10 <sup>-4</sup>	4.2×10 <sup>-3</sup>
*	*	*	*	*	*	*	*
Eu-150		7.0x10 <sup>-1</sup>	1.9×10 <sup>1</sup>	7.0×10 <sup>-1</sup>	1.9×10 <sup>1</sup>	6.1×10 <sup>4</sup>	1.6×10 <sup>6</sup>
(long lived)							
*	*	*	*	*	*	*	*
Te-132 (a)		5.0×10 <sup>-1</sup>	1.4×10 <sup>1</sup>	4.0×10 <sup>-1</sup>	1.1×10 <sup>1</sup>	1.1×10 <sup>4</sup>	3.0x10 <sup>5</sup>
*	*	*	*	*	*	*	*

\* \* \* \* \*

 $<sup>^{\</sup>text{b}}$  The values of A<sub>1</sub> and A<sub>2</sub> in Curies (Ci) are approximate and for information only; the regulatory standard units are Terabecquerels (TBq) (see Appendix A to part 71—Determination of A<sub>1</sub> and A<sub>2</sub>, Section I).