

March 6, 2014

Beverly E. Anderson, MPH, RS  
Interim Director  
Massachusetts Radiation Control Program  
Schrafft Center, Suite 1M2A  
529 Main Street  
Charlestown, MA 02129

Dear Ms. Anderson:

We have reviewed the final revisions to the Massachusetts regulations in 105 CMR 120.000, received by our office on January 8, 2014. These regulations were reviewed by comparison to the equivalent Nuclear Regulatory Commission (NRC) rules in 10 CFR Parts 20, 30, 31, 32, 33, 35, 40, 61, 70, 71, 150 and the requirements of the eight amendments identified in the enclosed State Regulation Status (SRS) Data Sheet. We discussed our review of the regulations with Joshua Daehler on February 28, 2014.

As a result of our review, we have three comments that stand from the May 3, 2012, review letter. These standing comments have been identified in Enclosure 1. Please note that we have limited our review to regulations required for compatibility and/or health and safety. We have determined that if these regulations are revised, incorporating our comments and without other significant change, they would meet the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-200, "Compatibility Categories and Health and Safety Identification for NRC Regulations and Other Program Elements."

We request that when you revise your regulations to address our comments, a copy of the "as published" regulations be provided to us for review. As requested in FSME Procedure SA-201, "Review of State Regulatory Requirements," please highlight the location of any changes made by Massachusetts in response to our comments, and provide a copy to Division of Materials Safety and State Agreements, FSME.

The SRS Data Sheet summarizes our knowledge of the status of other Massachusetts regulations, as indicated. Please let us know if you note any inaccuracies, or have any comments on the information contained in the SRS Data Sheet. This letter, including the SRS Data Sheet, is posted on the FSME website: <http://nrc-stp.ornl.gov/rulemaking.html>.

B. Anderson

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If you have any questions regarding the comments, the compatibility and health and safety categories, or any of the NRC regulations used in the review, please contact Kathleen Schneider, State Regulation Review Coordinator, at (301) 415-2320 ([kathleen.schneider@nrc.gov](mailto:kathleen.schneider@nrc.gov)) or Leira Cadrado at (301) 415-0707 ([leira.cuadrado@nrc.gov](mailto:leira.cuadrado@nrc.gov)).

Sincerely

***/RA K.N. Schneider for/***

John M. Moses, Acting Deputy Director  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials  
and Environmental Management Programs

Enclosure:

1. Compatibility Comments
2. Massachusetts SRS Data Sheet

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John M. Moses, Acting Deputy Director  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials  
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Enclosure:

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DISTRIBUTION: SP05  
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Incoming Document: ML14007A051

OFFICE	ASPB	ASPB	OGC	ASPB:BC	MSSA:DD
NAME	LCuadrado	KSchneider	PMoulding / sp	ADWhite / kns	JMoses / kns
DATE	01/24/14	01/27/14	02/24/14	03/06/14	03/06/14

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**Package ML14007A050**

**COMPATIBILITY COMMENTS ON MASSACHUSETTS FINAL REGULATIONS**

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
1	120.104 (C)(1)	30.15	2007-2 2007-3	B	<p><b>Certain Items Containing Byproduct Material</b></p> <p>Massachusetts omits “or persons who initially transfer for sale or distribution the following products containing byproduct material” after “or persons who incorporate radioactive material into the following products” in 120.104(C)(1).</p> <p>Massachusetts omits an equivalent regulation to 10 CFR 30.15(b) from 120.104(C)(1).</p> <p>Massachusetts needs to make the above changes to 120.104(C)(1) in order to meet the Compatibility Category B designation assigned to 10 CFR 30.15.</p> <p><b>Comment stands from letter dated May 3, 2012.</b></p>
2	120.787	71.88	2004-1	[B]	<p><b>Air Transport of Plutonium</b></p> <p>Massachusetts omits an equivalent regulation to 10 CFR 71.88(b) from 120.787.</p> <p>Massachusetts needs to make the above change in order to meet the Compatibility Category [B] designation assigned to 10 CFR 71.88.</p> <p><b>Comment stands from letter dated May 3, 2012.</b></p>
3	120.795	10 CFR 71 Appendix A	2004-1	[B]	<p><b>Determination of A<sub>1</sub> and A<sub>2</sub></b></p> <p>Massachusetts has several errors in the Tables in 120.795 Appendix A.</p> <p>Appendix Table A-1: 1) The values for Ar-39 are</p>

STATE SECTION	NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
				<p>incorrect</p> <ol style="list-style-type: none"> <li>2) The values for Cf-252(h) are incorrect</li> <li>3) MA omits values for Cm-245</li> <li>4) The values for Eu-150 (long lived) are incorrect</li> <li>5) The values for Np-236 (long lived) are incorrect</li> <li>6) The values for U-230 (medium lung absorption) are missing</li> <li>7) The values for U-230 (slow lung absorption) are incorrect</li> <li>8) The values for U-232 (medium lung absorption) are incorrect</li> <li>9) The values for U-232 (slow lung absorption) are missing</li> <li>10) The values for U-233 (medium lung absorption) are incorrect</li> <li>11) The values for U-233 (slow lung absorption) are incorrect</li> <li>12) The values for U-234 (medium lung absorption) are incorrect</li> <li>13) The values for U-234 (slow lung absorption) are incorrect</li> <li>14) The values for U-236 (medium lung absorption) are incorrect</li> <li>15) The values for U-236 (slow lung absorption) are incorrect</li> <li>16) The values for U (nat) are missing</li> </ol> <p>Table A-2:</p> <ol style="list-style-type: none"> <li>1) The values for Ac-228 are missing</li> <li>2) The values for Am-241 are incorrect</li> <li>3) The values for Am-242m (b) are incorrect</li> <li>4) The values for Am-243(b) are incorrect</li> <li>5) The values for Cm-243 are missing</li> <li>6) The values for Cm-244 are missing</li> <li>7) The values for Eu-150 (long lived) are incorrect</li> <li>8) The values for Np-236 (long lived) are incorrect</li> <li>9) The values for U-230 (medium</li> </ol>

STATE SECTION	NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
				<p>lung absorption) are incorrect</p> <p>10) The values for U-230 (slow lung absorption) are incorrect</p> <p>11) The values for U-232 (fast lung absorption) are incorrect</p> <p>12) The values for U-232 (medium lung absorption) are incorrect</p> <p>13) The values for U-232 (slow lung absorption) are incorrect</p> <p>14) The values for U-233 (medium lung absorption) are incorrect</p> <p>15) The values for U-233 (slow lung absorption) are incorrect</p> <p>16) The values for U-234 (medium lung absorption) are incorrect</p> <p>17) The values for U-234 (slow lung absorption) are incorrect</p> <p>18) The values for U-236 (medium lung absorption) are incorrect</p> <p>19) The values for U (nat) are incorrect</p> <p>20) The values for U (enriched to 20% or less) are incorrect</p> <p>21) The values for U (dep) are incorrect</p> <p>Table A-3:</p> <p>1) The value for only beta or gamma emitting radionuclides are known to be present in column "Activity concentration for exempt material (Bq/g)" is incorrect</p> <p>Table A-4:</p> <p>1) The value for 90 under "Ci/g" is incorrect</p> <p>Massachusetts needs to make the above changes to 120.795 Appendix A in order to meet the Compatibility Category [B] designation assigned to 10 CFR 71 Appendix A.</p> <p><b>Comment stands from letter dated May 3, 2012.</b></p>

STATE REGULATION STATUS

State: Massachusetts

Tracking Ticket Number: 13-53  
Date: March 6, 2014

[9 amendment(s) reviewed is identified by a \*  
at the beginning of the equivalent NRC requirement.]

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1991-1	Safety Requirements for Radiographic Equipment Part 34 55 FR 843 ( <b>Superceded by 1997-5</b> )	01/10/1994	Final	No Comments 03/03/1997	Massachusetts has adopted Final Regulations equivalent to RATS ID: 1997-5.
1991-2	ASNT Certification of Radiographers Part 34 56 FR 11504 ( <b>Superceded by 1997-5</b> )	none	Not Required	Not Required	Massachusetts has adopted Final Regulations equivalent to RATS ID: 1997-5.
1991-3	Standards for Protection Against Radiation Part 20 56 FR 23360; 56 FR 61352; 57 FR 38588; 57 FR 57877; 58 FR 67657; 59 FR 41641; 60 FR 20183	01/01/1994	Final	No Comments 03/03/1997	
1991-4	Notification of Incidents Parts 20, 30, 31, 34, 39, 40, 70 56 FR 64980	10/15/1994	Final	No Comments 03/03/1997	
1992-1	Quality Management Program and Misadministrations Part 35 56 FR 34104 ( <b>Superceded by 2002-2</b> )	01/27/1995	Final	No Comments 03/03/1997	Massachusetts has adopted Final Regulations equivalent to RATS ID: 2002-2.
1992-2	Eliminating the Recordkeeping Requirements for Departures from Manufacturer's Instructions Parts 30, 35 57 FR 45566	none	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1993-1	Decommissioning Recordkeeping and License Termination: Documentation Additions [Restricted areas and spill sites] Parts 30, 40 58 FR 39628	10/25/1996	Final	No Comments 03/03/1997	
1993-2	Licensing and Radiation Safety Requirements for Irradiators Part 36 58 FR 7715	07/01/1996	Final	No Comments 03/03/1997	
1993-3	Definition of Land Disposal and Waste Site QA Program Part 61 58 FR 33886	07/22/1996	Final	No Comments 03/03/1997	
1994-1	Self-Guarantee as an Additional Financial Mechanism Parts 30, 40, 70 58 FR 68726; 59 FR 1618	none	Final	No Comments 03/03/1997	These regulation changes are not required to be adopted for purposes of Compatibility.
1994-2	Uranium Mill Tailings Regulations: Conforming NRC Requirements to EPA Standards Part 40 59 FR 28220	07/01/1997	Not Applicable	Not Applicable	Massachusetts does not have authority to regulate this material under its Agreement.
1994-3	Timeliness in Decommissioning Material Facilities Parts 30, 40, 70 59 FR 36026	08/15/1997	Final ML062980638	No Comments 11/30/2006 ML063380019	
1995-1	Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use Parts 30, 32, 35 59 FR 61767; 59 FR 65243; 60 FR 322	01/01/1998	Final	No Comments 09/21/1999	



RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
1995-2	Frequency of Medical Examinations for Use of Respiratory Protection Equipment Part 20 60 FR 7900	03/13/1998	Final ML062980638	No Comments 11/30/2006 ML063380019	
1995-3	Low-Level Waste Shipment Manifest Information and Reporting Parts 20, 61 60 FR 15649; 60 FR 25983	03/01/1998	Final ML062980638	No Comments 11/30/2006 ML063380019	
1995-4	Performance Requirements for Radiography Equipment Part 34 60 FR 28323 <b>(Superseded by 1997-5)</b>	06/30/1998	Not Required	Not Required	Massachusetts has adopted Final Regulations equivalent to RATS ID: 1997-5.
1995-5	Radiation Protection Requirements: Amended Definitions and Criteria Parts 19, 20 60 FR 36038	08/14/1998	Final ML062980638	No Comments 11/30/2006 ML063380019	
1995-6	Clarification of Decommissioning Funding Requirements Parts 30, 40, 70 60 FR 38235	11/24/1998	Final ML062980638	No Comments 11/30/2006 ML063380019	
1995-7	Medical Administration of Radiation and Radioactive Materials Parts 20, 35 60 FR 48623 <b>(Superseded by 2002-2 and 2005-2)</b>	10/20/1998	Final	No Comments 09/21/1999	Massachusetts has not yet adopted Final Regulations equivalent to RATS ID: 2005-2.
1996-1	Compatibility with the International Atomic Energy Agency Part 71	04/01/1999	Final	No Comments 09/21/1999	Massachusetts has not yet adopted Final Regulations equivalent to RATS ID: 2004-1.

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
	60 FR 50248; 61 FR 28724 <b>(Superceded by 2004-1)</b>				
1996-2	One Time Extension of Certain Byproduct, Source and Special Nuclear Materials Licenses Parts 30, 40, 70 61 FR 1109	02/15/1999	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1996-3	Termination or Transfer of Licensed Activities: Record keeping Requirements Parts 20, 30, 40, 61, 70 61 FR 24669	06/17/1999	Final	No Comments 09/21/1999	
1997-1	Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act Part 20 61 FR 65120	01/9/2000	Final	No Comments 09/21/1999	
1997-2	Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State Part 150 62 FR 1662	02/27/2000	Final ML062980638	No Comments 11/30/2006 ML063380019	
1997-3	Criteria for the Release of Individuals Administered Radioactive Material Parts 20, 35 62 FR 4120	05/29/2000	Final ML062980638	No Comments 11/30/2006 ML063380019	
1997-4	Fissile Material Shipments and Exemptions Part 71 62 FR 5907 <b>(Superceded by 2004-1)</b>	02/10/2000	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility. (See STP-97-078)
1997-5	Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography	06/27/2000	Final	No Comments 09/21/1999	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
	Operations Parts 30, 34, 71, 150 62 FR 28947				
1997-6	Radiological Criteria for License Termination Parts 20, 30, 40, 70 62 FR 39057	08/20/2000	Final ML062980638	No Comments 11/30/2006 ML063380019	
1997-7	Exempt Distribution of a Radioactive Drug Containing One Micro curie of Carbon-14 Urea Part 30 62 FR 63634	01/02/2001	Final	No Comments 09/21/1999	
1998-1	Deliberate Misconduct by Unlicensed Persons Parts 30, 40, 61, 70, 71, 150 63 FR 1890; 63 FR 13773	02/12/2001	Final ML062980638	No Comments 11/30/2006 ML063380019	
1998-2	Self-Guarantee of Decommissioning Funding by Nonprofit and Non-Bond-Issuing Licensees Parts 30, 40, 70 63 FR 29535	07/01/2001	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1998-3	License Term for Medical Use Licenses Part 35 63 FR 31604 (Superceded by 2002-2)	07/10/2001	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility. (See STP-98-074) Massachusetts has adopted Final Regulations equivalent to RATS ID: 2002-2.
1998-4	Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations Part 34 63 FR 37059	07/09/2001	Final ML062980638	No Comments 11/30/2006 ML063380019	
1998-5	Minor Corrections, Clarifying Changes, and a Minor Policy Change	10/26/2001	Final ML062980638	No Comments 11/30/2006 ML063380019	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
	Parts 20, 32, 35, 36, 39 63 FR 39477; 63 FR 45393				
1998-6	Transfer for Disposal and Manifests: Minor Technical Conforming Amendment Part 20 63 FR 50127	11/20/2001	Final ML062980638	No Comments 11/30/2006 ML063380019	
1999-1	Radiological Criteria for License Termination of Uranium Recovery Facilities Part 40 64 FR 17506	06/11/2002	Not Applicable	Not Applicable	Massachusetts does not have authority to regulate this material under its Agreement.
1999-2	Requirements for Those Who Possess Certain Industrial Devices Containing Byproduct Material to Provide Requested Information Part 31 64 FR 42269	10/04/2002	Not Required	Not Required	These regulation changes are not required to be adopted for purposes of Compatibility.
1999-3	Respiratory Protection and Controls to Restrict Internal Exposure Part 20 64 FR 54543; 64 FR 55524	02/02/2003	Final ML062980638	No Comments 11/30/2006 ML063380019	
2000-1	Energy Compensation Sources for Well Logging and Other Regulatory Clarifications Part 39 65 FR 20337	05/17/2003	Final ML062980638	No Comments 11/30/2006 ML063380019	
2000-2	New Dosimetry Technology Parts 34, 36, 39 65 FR 63750	01/08/2004	Final ML062980638	No Comments 11/30/2006 ML063380019	

<b>RATS ID</b>	<b>NRC Chronology Identification</b>	<b>Date Due for State Adoption</b>	<b>Incoming Package</b>	<b>Outgoing Package</b>	<b>Notes</b>
2001-1	Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material Parts 30, 31, 32 65 FR 79162	02/16/2004	Final ML062980638	No Comments 11/30/2006 ML063380019	
2002-1	Revision of the Skin Dose Limit Part 20 67 FR 16298	04/05/2005	Final ML062980638	No Comments 11/30/2006 ML063380019	
2002-2	Medical Use of Byproduct Material Parts 20, 32, 35 67 FR 20249	10/24/2005	Final ML062980638	No Comments 11/30/2006 ML063380019	
*2003-1	Financial Assurance for Materials Licensees Parts 30, 40, 70 68 FR 57327	12/03/2006	Final ML14007A051	No Comments 03/06/2014 ML14007050	
*2004-1	Compatibility With IAEA Transportation Safety Standards and Other Transportation Safety Amendments Part 71 69 FR 3697	10/01/2007	Final ML14007A051	Comments 03/06/2014 ML14007050	
2005-1	Security Requirements for Portable Gauges Containing Byproduct Material Part 30 70 FR 2001	07/11/2008	Final ML120860009	No Comments 05/03/2012 ML120960551	
*2005-2	Medical Use of Byproduct Material - Recognition of Specialty Boards Part 35 70 FR 16336; 71 FR 1926	04/29/2008	Final ML14007A051	No Comments 03/06/2014 ML14007050	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
2005-3	Increased Controls for Risk-Significant Radioactive Sources (NRC Order EA-05-090) 70 FR 72128	12/01/2005	License Condition ML080110677	No Comments 10/04/2005 ML052780024	
*2006-1	Minor Amendments Parts 20, 30, 32, 35, 40 and 70 71 FR 15005	03/27/2009	Final ML14007A051	No Comments 03/06/2014 ML14007050	
2006-2	National Source Tracking System - Serialization Requirements Part 32 with reference to Part 20 Appendix E 71 FR 65685	02/06/2007	License Condition ML070360500	No Comments 02/16/2007 ML070470063	
2006-3	National Source Tracking System Part 20 71 FR 65685, 72 FR 59162	01/31/2009	Final ML102850241	No Comments 11/10/2010 ML102990077	
*2007-1	Medical Use of Byproduct Material - Minor Corrections and Clarifications Parts 32 and 35 72 FR 45147, 54207	10/29/2010	Final ML14007A051	No Comments 03/06/2014 ML14007050	
*2007-2	Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements Parts 30, 31, 32, 150 72 FR 58473	12/17/2010	Final ML14007A051	Comments 03/06/2014 ML14007050	
*2007-3	Requirements for Expanded Definition of Byproduct Material Parts 20, 30, 31, 32, 33, 35, 61, 150	11/30/2010	Final ML14007A051	Comments 03/06/2014 ML14007050	

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
	72 FR 55864				
2007-4	Order Imposing Fingerprinting Requirements and Criminal History Records Check Requirements for Unescorted Access to Certain Radioactive Material NRC Order EA-07-305 72 FR 70901	06/05/2008	License Condition ML080800501	No Comments 04/14/2008 ML081050505	
2008-1	Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent Parts 19, 20 72 FR 68043	02/15/2011	Final ML120860009	No Comments 05/03/2012 ML120960551	
*2009-1	Medical Use of Byproduct Material – Authorized User Clarification Part 35 74 FR 33901	09/28/2012	Final ML14007A051	No Comments 03/06/2014 ML14007050	
2011-1	Decommissioning Planning Parts 20, 30, 40, 70 76 FR 35512	12/17/2015			
2011-2	Licenses, Certifications, and Approvals for Materials Licensees Parts 30, 36, 39, 40, 70, and 150 76 FR 56951	11/14/2014			
*2012-1	Change of Compatibility of 10 CFR 31.5 and 31.6 (See RATS ID: 2001-1 for Rule text) 77 FR 3640	01/25/2015	Final ML14007A051	No Comments 03/06/2014 ML14007050	
2012-2	Advance Notification to Native American Tribes of Transportation of Certain Types of Nuclear Waste Part 71 77 FR 34194	08/10/2015			

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Package	Outgoing Package	Notes
2012-3	Technical Corrections Part 30, 34, 40 and 70 77 FR 39899	08/06/2015			
2012-4	Requirements for Distribution of Byproduct Material Parts 30, 31, 32, 40 and 70 77 FR 43666	10/23/2015			
2013-1	Physical Protection of Byproduct Material, 10 CFR Parts 20, 30, 32, 33, 34, 35, 36, 37, 39, and 71 78 FR 16922	03/19/2016			
2013-2	Distribution of Source Material to Exempt Persons and to General Licensees and Revision of General License and Exemptions, 10 CFR Parts 30, 40, and 70 78 FR 32310	08/27/2016			