



COLORADO

Department of Public
Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

September 27, 2016

Pamela J. Henderson, Deputy Director
Division of Material Safety, State, Tribal
and Rulemaking Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
T8-E24
Washington, D.C. 20555-0001

Dear Ms. Henderson:

Enclosed is a copy of the final as published revisions to the Colorado *Rules and Regulations Pertaining to Radiation Control*, 6 CCR 1007-1, Part 16, *Radiation Safety Requirements for Well Logging and Subsurface Tracer Studies*. The final rule was adopted by the Colorado Board of Health on July 20, 2016 and became effective September 14, 2016. Also included is the draft redline rule as reviewed and adopted by the Colorado Board of Health on July 20, 2016.

The changes to Part 16 align the language of the rule with the wording and requirements of 10 CFR Part 39. Additionally, Table 1 of Attachment 1 identifies two Regulatory Action Tracking System (RATS) items specific to RATS 2011-2 and 2013-1 which have been incorporated into the final rule. Attachment 2 contains responses and comment resolution for comments made by NRC in correspondence dated March 18, 2016 regarding the review of Colorado's draft Part 16 rule.

In NRC's correspondence dated September 29, 2015, NRC commented that Colorado omitted the general requirements equivalent to 10 CFR 39.13 regarding specific licenses for well logging. In Section 16.3 of the final rule, Colorado has incorporated requirements equivalent to those found in 10 CFR 39.13.

We believe that adoption of this amended final Part 16 rule satisfies the compatibility and health and safety categories established in the Office of Federal and State Materials and Environmental Programs (FSME) Procedure SA-200.

If you have any questions, please feel free to contact me at 303-692-3403 or James Jarvis of my staff at 303-692-3454 or james.jarvis@state.co.us.

Sincerely,



Jennifer T. Opila, MPA
Radiation Program Manager

Enclosures:

Attachment 1 (1 page);

Attachment 2 (5 pages);

Colorado Part 16 final published rule (effective September 14, 2016);

Colorado Part 16 draft rule as adopted by the Colorado Board of Health on July 20, 2016
(Draft dated 07/08/16).

Cc: Michelle Beardsley, Senior Project Manager, Office of Office of Federal and State
Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission,
T8-E24, Washington, D.C. 20555-0001 (Sent via email on September 27, 2016)

Attachment 1
Pamela J. Henderson, Deputy Director
U.S. Nuclear Regulatory
Commission
September 27, 2016

Table 1. Specific RATS items addressed in the proposed rule.

RATS ID	CFR Title	State Section(s)
2011-2	Specific licenses for well logging. 10 CFR 39.13(a)	16.3 The final rule adds section 16.3, which is equivalent to 10 CFR 39.13.
2013-1	Purpose and scope. 10 CFR 39.1	16.1.4 The final rule adds a cross-reference to Colorado Part 22 (Part 22 is Colorado's equivalent to 10 CFR Part 37).

**COLORADO RESPONSE TO NRC COMPATIBILITY COMMENTS ON
 COLORADO PROPOSED REGULATIONS – NRC LETTER DATED MARCH 18, 2016**

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
1	16.3.1.1	39.13(a)	2011-2	H&S	<p>Specific licenses for well logging</p> <p>CO should revise 16.3.1.1 to read "...for byproduct, source, and special nuclear material, as appropriate,..." The current reference to 10 CFR 70.23 includes regulations that carry compatibility category NRC and should not be referenced by CO.</p> <p>CO needs to address the comment above to meet the Compatibility Category H&S designation assigned to 10 CFR 39.13.</p> <p>COMMENT MODIFIED FROM NRC LETTER DATED SEPTEMBER 29, 2015 (ML15253A672)</p>
<p><i>Part 16, Section 16.3.1.1 was modified to incorporate the language requested by NRC. References to 10 CFR 70.23 were removed from the rule.</i></p>					
2	16.4.1.5	39.15(a)(5)	N/A	C	<p>Agreement with well owner or operator</p> <p>CO should revise the reference in 16.4.1.5 to read "...expended, the requirements of 16.25.3.2(1) and 16.25.5 must be..."</p> <p>CO needs to address the comment above to meet the Compatibility Category C designation assigned to 10 CFR 39.15.</p>
<p><i>Part 16, Section 16.4.1.5 was modified to incorporate cross-references equivalent to 10 CFR Part 39.</i></p>					
3	16.12.1 16.12.2 16.12.3	39.41(a) 39.41(d)(1)(i)	N/A	B	<p>Design and performance criteria for sealed sources</p> <p>CO should remove the date, December 30, 1986, from 16.12.1 and 16.12.3.</p> <p>CO should delete 16.12.2 in its entirety.</p> <p>CO should revise 16.12.3.3(1) to</p>
<p><i>All changes requested by NRC in this comment have been incorporated into the final Part 16 rule.</i></p>					

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
					<p>require the test source to be held at <i>minus</i> 40°C for 20 minutes.</p> <p>CO needs to address the comments above to meet the Compatibility Category B designation assigned to 10 CFR 39.41.</p>
4	16.12.5	39.53	N/A	C	<p>Energy compensation source</p> <p>CO should revise 16.12.5 to clarify that a licensee may use an ECS <i>only if</i> the ECS contains 100 microcuries or less of licensed material.</p> <p>CO should revise the references in 16.12.5.2 to directly correspond to 10 CFR 39.15, 39.35, 39.37, 39.39, and 39.77 (39.51 is intentionally left out because it is assigned Compatibility Category D).</p> <p>CO needs to address the comments above to meet the Compatibility Category C designation assigned to 10 CFR 39.53.</p>
<p>Part 16, Section 16.12.5 was modified to the language specified in the comment.</p> <p>The references in 16.12.5.2 were updated to directly correspond to the equivalent provisions of 10 CFR Part 39.</p>					
5	16.12.6 16.12.7	39.55	N/A	C	<p>Tritium neutron generator target source</p> <p>The structure of 10 CFR Part 39 and CO's Part 16 is sufficiently different so that the exceptions in 16.12.6 and 16.12.7 do not directly correspond to the exceptions in 39.55(a) and (b). CO should revise 16.12.6 and 16.12.7 so that their exceptions directly correspond to the exceptions in 39.55(a) and (b) and so they do not except themselves (16.12.6 and 16.12.7 are in 16.12 and yet they except 16.12).</p> <p>CO needs to address the comment above to meet the Compatibility Category C designation assigned to</p>
<p>Part 16, Sections 16.12.6 through 16.12.8 were modified and restructured to ensure consistency with 10 CFR Part 39.</p>					

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
					10 CFR 39.55.
6	16.15 Appendix 16A	39.61	N/A	B	<p>Training</p> <p>CO should revise 16.15.1.1 by replacing the phrase “, in a course recognized by the Department, the NRC, or an Agreement State, instruction” with the word “training”.</p> <p>CO should delete the phrase “in the handling of sources of radiation” from 16.15.2.</p> <p>CO should remove the reference to Part 16 from 16.15.2.1.</p> <p>CO should revise 16.15.2.2 by replacing the phrase “in 16.16” with “required by 16.16”.</p> <p>CO should delete 16A.1.3(1), 16A.1.3(2), 16A.5, and 16A.6 from Part 16, Appendix 16A.</p> <p>CO needs to address the comments above to meet the Compatibility Category B designation assigned to 10 CFR 39.61.</p>
<p><i>All changes requested by NRC in this comment have been incorporated into the final Part 16 rule for consistency with the language in 10 CFR Part 39.</i></p>					
7	16.16.2 16.16.5 16.16.6	39.63	N/A	C	<p>Operating & emergency procedures</p> <p>CO should add the phrase “including surveys for detecting contamination...” and also reference the appropriate sections of Part 16 to the end of 16.16.2.</p> <p>CO should add the phrase “to prevent accidental loss, tampering, or unauthorized removal” to the end of 16.16.5.</p> <p>CO should revise 16.16.6 to require procedures for minimizing personnel</p>
<p><i>All changes requested by NRC in this comment have been incorporated into the final Part 16 rule for consistency with the language in 10 CFR Part 39.</i></p>					

STATE SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
					<p>exposure during normal operations and from inhalation and ingestion of tracer materials.</p> <p>CO needs to address the comments above to meet the Compatibility Category C designation assigned to 10 CFR 39.63.</p>
8	16.23	39.73	N/A	C	<p>Documents & records required at field stations</p> <p>CO should revise the introductory language in 16.23 so that it specifies that the documents and records maintained by the licensee must be maintained at the field station.</p> <p>CO needs to address the comment above to meet the Compatibility Category C designation assigned to 10 CFR 39.73.</p>
<p><i>The language of 16.23 has been modified as requested by NRC for consistency with the language in 10 CFR Part 39.</i></p>					
9	16.25.2.2 16.25.3.1	39.77(a) 39.77(c)(1)	N/A	C	<p>Notification of incidents: abandonment procedures for irretrievable sources</p> <p>The requirements in 16.25.2.2 are consistent with 39.77(a), however, in order for 16.25.2.2 to apply, the condition in 16.25.2 must be true. CO should revise 16.25 so that 16.25.2.2 applies regardless of the location of a ruptured source (i.e. lodged downhole or somewhere else).</p> <p>CO should change the word “ability” to “inability” in 16.25.3.1.</p> <p>CO needs to address the comments above to meet the Compatibility Category C designation assigned to 10 CFR 39.77.</p>
<p><i>In the final Part 16 rule, the structure of 16.25.2 was modified such that it is no longer conditional.</i></p> <p><i>In 16.25.3.1, the correction was made as requested.</i></p>					

STATE SECTION	NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS	
The following comments are editorial in nature and are not related to compatibility					
1	16.6.1.1	39.31(b)	N/A	C	<p>Labels, security, and transportation precautions</p> <p>In 16.6.1.1 the inclusion of the phrase “(or exposure to)” does not make sense within the context of the sentence.</p>
	<p><i>Section 16.6.1.1 has been modified as requested by NRC by removing the offending phrase.</i></p>				
2	Part 16	Part 39	N/A	N/A	CO should consider changing all uses of the word “microcurie” to “microcuries” for consistency.
3	16.14	39.43	N/A	C	<p>Inspection, maintenance, and opening of a source or source holder</p> <p>By adding the phrase “required by 16.14.1 and 16.4.2” to 16.14.6, CO makes it less clear that records of inspection and maintenance should be retained because 16.14.1 and 16.14.2 do not require records of inspection and maintenance.</p>
	<p><i>The changes requested by NRC in comments 2 and 3 have been incorporated into the final Part 16 rule for consistency with the language in 10 CFR Part 39.</i></p>				