



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 30, 2015

Ms. Ruth E. McBurney  
Executive Director  
Conference of Radiation Control  
Program Directors, Inc.  
Office of Executive Director  
1030 Burlington Lane, Suite 4B  
Frankfort, KY 40601

Dear Ms. McBurney:

We have reviewed the proposed revision to Part W, *Radiation Safety Requirements for Well Logging Operations and Subsurface tracer Studies*, of the Suggested State Regulations (SSR), received by our office on October 3, 2014. These regulations were reviewed by comparison to the equivalent U.S. Nuclear Regulatory Commission (NRC) rules in 10 CFR Part 39.

As a result of our review, we have 13 compatibility comments that have been identified in the enclosure. 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 Nuclear Material Safety and Safeguards (NMSS) Procedure [SA-200](#). Also note that we have provided five comments, for your consideration, that are editorial in nature.

The Conference of Radiation Control Program Directors (CRCPD) will need to resubmit Part W to address changes necessary for the implementation of this amendment. We are not able to provide federal concurrence until the comments have been addressed.

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 NMSS Procedure [SA-201](#), "Review of State Regulatory Requirements," please highlight the location of any changes made by the CRCPD, in response to our comments and provide a copy to NMSS.

R. McBurney

2

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 Michelle Beardsley, State Regulation Review Coordinator, at (610) 337-6942 ([Michelle.Beardsley@nrc.gov](mailto:Michelle.Beardsley@nrc.gov)) or David Spackman at (301) 415-6389 ([David.Spackman@nrc.gov](mailto:David.Spackman@nrc.gov)).

Sincerely,

***/RA Chris Einberg for/***

Laura A. Dudes, Director  
Division of Material Safety, State Tribal  
and Rulemaking Programs  
Office of Nuclear Material Safety  
and Safeguards

Enclosure:  
Compatibility Comments

cc: Bruce Hirschler, CRCPD

**COMPATIBILITY COMMENTS ON FINAL CRCPD PART W REGULATIONS**

SSR SECTION		NRC SECTION	RATS ID	CATEGORY	SUBJECT and COMMENTS
1	W.3	10 CFR 39.2	N/A	C	<p><b>Definition: “Well logging”</b></p> <p>Part W needs to delete the word “may” in front of the word “contain.”</p> <p>Part W needs to add the words “or are used to detect licensed materials” after the words “of radiation.”</p> <p>CRCPD SSR Part W, W.3, needs to include the above changes in order to meet the Compatibility Category C designation assigned to 10 CFR 39.2., definition of “Well logging.”</p>
2	W.13	10 CFR 39.13	N/A	H&S	<p><b>Specific licenses for well logging</b></p> <p>Part W omits an equivalent of 10 CFR 39.13(a). Part W needs to include an equivalent of 10 CFR 39.13(a).</p> <p>CRCPD SSR Part W, W.13, needs to include the above change in order to meet the Compatibility Category H&amp;S designation assigned to 10 CFR 39.13.</p>
3	W.4 W.501d.i. W.501e	10 CFR 39.15	N/A	C	<p><b>Agreement with well owner or operator</b></p> <p>W.4a.iv. refers to the radiation monitoring required by “W.501c.i.” but should refer to “W.402.a.”</p> <p>W.4a.v. omits, but needs to include, the statement “they must be decontaminated before release from the site or released for unrestricted use.”</p> <p>W.4. omits an equivalent requirement of 10 CFR 39.15(a)(5). Although W.501d.i. and W.501.e. contain requirements that the well owner/operator be advised of certain things related to abandoned sources, and that the plaque meet certain requirements, this relates to 10 CFR 39.77(c)(2), but is not the equivalent of, and does not meet, the essential</p>

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					<p>objective of 10 CFR 39.15(a)(5), which requires that the written agreement with the well owner/operator, which is required to be in place prior to well logging operations, identify who will be responsible to meet the requirements related to abandonment and the plaque. W.4. needs to include an equivalent for 10 CFR 39.15(a)(5).</p> <p>W.4. omits, but needs to include, an equivalent for 10 CFR 39.15(c).</p> <p>W.4. omits, but needs to include, an equivalent for 10 CFR 39.15(d).</p> <p>W.501e. omits, but needs to include, that the plaque is not required to be mounted at the surface of the well if it is not practicable.</p> <p>W.501e. omits, but needs to include, the requirements for plaque size “must be at least 17 cm [7 inches] square and 3 mm [1/8 inch] thick.”</p> <p>CRCPD SSR Part W, W.4 and W.501, need to include the above changes in order to meet the Compatibility Category C designation assigned to 10 CFR 39.15.</p>
4	W.104	10 CFR 39.33(a), (c), (d)	N/A	C	<p><b>Radiation detection instruments</b></p> <p>W.104c. adds the phrase “in accordance with procedures outlined in ANSI ()” but should provide a reference for the ANSI standard.</p> <p>W.104c.ii. says “approximately a and b of full-scale” but should say “approximately 1/3 and 2/3 of full scale.”</p> <p>CRCPD SSR Part W, W.104, needs to include the above change in order to meet the Compatibility Category C designation assigned to 10 CFR 39.33(c).</p>

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5	W.105	10 CFR 39.35	N/A	C	<p><b>Leak testing of sealed sources</b></p> <p>W.105b.i. requires that leak test results for energy compensated sources be maintained for three years after the leak test is performed. However W.105b.ii. states that all other leak test records be maintained for “at least six months.” In order to meet the essential objective, all leak test results need to be maintained for a period of 3 years after the leak test is performed.</p> <p>CRCPD SSR Part W, W.105, needs to include the above change in order to meet the Compatibility Category C designation assigned to 10 CFR 39.35.</p>
6	W.107	10 CFR 39.39	N/A	C	<p><b>Records of material use</b></p> <p>W.107d. substitutes the words “disposal of any unused tracer material” for the words “disposition of any unused tracer material.” As written, W.107d. requires “disposal” rather than other options, such as transfer or return to storage, etc. This could create conflict and should be revised.</p> <p>CRCPD SSR Part W, W.107, needs to include the above change in order to meet the Compatibility Category C designation assigned to 10 CFR 39.39.</p>
7	W.108	10 CFR 39.41	N/A	B	<p><b>Design and performance criteria for sealed sources</b></p> <p>W.108d.i.(e) states “<math>1.695 \times 10^8</math> pascals” but should state “<math>1.695 \times 10^7</math> pascals.”</p> <p>CRCPD SSR Part W, W.108d.i.(e), needs to include the above change in order to meet the Compatibility Category B designation assigned to 10 CFR 39.41.</p>

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8	W.110 W.202q	10 CFR 39.43	N/A	C	<p><b>Inspection, maintenance, and opening of a source or source holder</b></p> <p>W.202q. contains the requirement of 10 CFR 39.43(c) but omits the equivalent text for “unless a written procedure developed pursuant to 10 CFR 39.63 has been approved by the Commission pursuant to 10 CFR 39.13(c) or by an Agreement State.” As a result, W.202q. may cause confusion and should be clarified. See comment for W.202 for further information.</p> <p>W.110b., for semi-annual inspections, omits, but needs to include, the requirement to document: the date, equipment involved, inspection and maintenance operations performed, any defects found, and any actions taken to correct the defects.</p> <p>W.110c. refers to an “inspection conducted pursuant to W.110a.” but should refer to “inspection conducted pursuant to W.110b.” As written, W.110a. (for before each use inspections), already contains the requirement to remove damaged equipment. However, W.110b., (for semi-annual inspection), does not contain the requirement but should; therefore, W.110c. should refer to W.110b.</p> <p>CRCPD SSR Part W, W.110 and W.202, need to include the above changes in order to meet the Compatibility Category C designation assigned to 10 CFR 39.43.</p>
9	W.201	10 CFR 39.61	N/A	B	<p><b>Training</b></p> <p>The specific training subjects in Part W, Appendix A, include “VI. The licensee’s or registrant’s record keeping procedures.” This is more restrictive and should not be included in the list of specific training subjects and needs to be deleted.</p>

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					<p>W.201a.i discusses “a course recognized by the Agency, the NRC, or an Agreement State.” NRC does not recognize such courses. The NRC regulation requires training but does not specify who should perform the training. The training can be provided by the licensee. Requiring “a course recognized by the Agency, the NRC, or an Agreement State” is more restrictive. The requirement should be revised so that the individual “has completed training in...” rather than specifying a “course.”</p> <p>W.201a.ii. discusses reading and receiving instruction in the regulations but omits the requirement for “receiving copies of” the regulations, the license, and the operating and emergency procedures. The section needs to be revised to include receiving copies of the specified documents.</p> <p>W.201a.iv. states “W.201a.i. through W.201a.iii” but should state “W.201a.i. through W.201a.ii.” W.201a.iii should not be included because this is the field demonstration and does not require a written test.</p> <p>W.201b.i. should include “Part A” as well as Parts D, and J similar to that required for supervisors in W.201a.ii.</p> <p>W.201b.iii. should reference “W.201b.i and W.201b.ii” instead of “W.201a.i and W.201a.ii”</p> <p>CRCPD SSR Part W, W.201, needs to include the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 39.61.</p>
10	W.202	10 CFR 39.63	N/A	C	<p><b>Operating &amp; Emergency procedures</b></p> <p>W.202 omits an equivalent provision to 10 CFR 39.63(b). This provision needs to be included.</p>

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				<p>W.202b. needs to include the words “including surveys for detecting contamination required by...” and also needs to reference the appropriate sections of W.401.</p> <p>W.202g. needs to include the words “to prevent accidental loss, tampering, or unauthorized removal” after the word “transportation.”</p> <p>As written, W.202f. only addresses exposures in the event of an accident. However, exposures from inhalation or ingestion of tracer material can also result from normal operations, not just accidents. W.202f. needs to also address “exposures from inhalation and ingestion of tracer material” from other than accident conditions.</p> <p>W.202i. and W.202o. are mostly redundant and could create conflict. W.202i. should be deleted to prevent conflict and duplication. W.202o. is more comprehensive and compatible with the requirement and should be retained.</p> <p>W.202h. and W.202m. are mostly redundant and could create conflict. W.202h. should be deleted to prevent conflict and duplication. W.202m. is more comprehensive and compatible with the requirement and should be retained.</p> <p>W.202p. refers to Part E.38. SSR CR Part E.38 provides specific reporting requirements for radiography licensees and is not an appropriate reference in Part W. W.202p. should be revised to refer to an appropriate regulatory reference.</p> <p>W.202 requires that the licensee have operating and emergency procedures in “at least the following:” W.202q. is one of the items included in the list of</p>



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					<p>procedures. However, W.202q. prohibits certain actions. It may cause confusion to require a procedure that prohibits actions from being taken. W.202q. should be clarified that such actions are prohibited unless there are procedures to perform such actions. See comment for W.110 for further information.</p> <p>CRCPD SSR Part W, W.202, needs to include the above changes in order to meet the Compatibility Category C designation assigned to 10 CFR 39.63.</p>
11	W.401	10 CFR 39.67	N/A	C	<p><b>Radiation surveys</b></p> <p>W.401a. states that radiation hazards should be evaluated “as required by W.401b. through W.401h.” However, W.401h. is a recordkeeping requirement and not a survey requirement. W.401a. should be revised to read “as required by W.401b. through W.401g.”</p> <p>W.401a. states that “a survey meter shall be used to ensure” however, a survey meter does not ensure. It is use of a survey meter to perform radiation surveys that ensures. The text of W.401a. should be revised for clarification.</p> <p>W.401e. is an exception for performing radiation surveys for tracer materials using hydrogen-3, carbon-14, and sulfur-35. Although the practical reason why these were excluded is understood, this language makes the regulation less restrictive. W.401e. needs to delete “except those using hydrogen-3, carbon-14, and sulfur-35.”</p> <p>CRCPD SSR Part W, W.401, needs to include the above changes in order to meet the Compatibility Category C designation assigned to 10 CFR 39.67.</p>

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12	W.301	10 CFR 39.71	N/A	C	<p><b>Security</b></p> <p>W.301b. adds a requirement that if a source becomes lodged in a well, and only the logging supervisor is present, certain actions should be taken in order for the supervisor to leave the job site. This added requirement does not meet the essential objectives. Some well logging sources can be Category 2 or greater quantities. If the source is Category 2 or greater, additional security requirements would be necessary in order for the individual to no longer maintain constant control and surveillance. The section needs to be revised or deleted.</p> <p>CRCPD SSR Part W, W.301, needs to include the above change in order to meet the Compatibility Category C designation assigned to 10 CFR 39.71.</p>
13	W.501	10 CFR 39.77(a), (c), (d)	N/A	C	<p><b>Notification of incidents: abandonment procedures for irretrievable sources</b></p> <p>W.501c.i. contains a requirement to monitor for the presence of radioactive contamination if a source is lodged downhole. However, this requirement is already specified in W.402c., making the requirement in W.501c.i. repetitive and could create conflict and duplication.</p> <p>W.501c. and W.501c.ii. specify that a ruptured source be reported to the agency “whenever a sealed source or device containing radioactive material is lodged downhole.” However, a source can rupture whether it is lodged downhole or during normal operations. 10 CFR 37.77(a) requires that a ruptured source be reported, not just if it is lodged downhole. The words “Whenever a sealed source or device containing radioactive material is lodged downhole” must be deleted from W.501c.</p>

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					<p>W.501d. omits and needs to include, an equivalent for 10 CFR 39.77(c)(3).</p> <p>The parenthetical in W.501d.iii. as well as the requirement in W.501d.iii.(11) must include “Federal” as well as State Agencies.</p> <p>CRCPD SSR Part W, W.501, needs to include the above change in order to meet the Compatibility Category C designation assigned to 10 CFR 39.77(a),(c), and (d).</p>
The following comments are editorial in nature.					
1	W.1 W.2	10 CFR 39.1	N/A	D	<p><b>Purpose and Scope</b></p> <p>Part W Section W.1. provides the list of requirements of other Suggested State Regulations, but does not include Part V “Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material.” Consideration should be given to add Part V to the list of applicable Parts.</p>
2	W.3	10 CFR 39.2	N/A	D	<p><b>Definition: “Irretrievable well logging source”</b></p> <p>The definition contains the reference to “LWD” which is only used in this definition and in the definition for “Logging While Drilling.” It does not appear in the regulation text, and seems unnecessary. Also, the phrase “over which control has been lost” in the definition is confusing and could be misinterpreted.</p> <p>Furthermore, the definition for “Logging while drilling (LWD)” seems unnecessary since the term only appears in the definition for “Irretrievable well logging source” and not in the regulation text.</p>

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					Additionally, the definition for "Wireline" seems unnecessary since the term only appears in the definition for "Irretrievable well logging source" and not in the regulation text.
3	W.104	10 CFR 39.33(a), (c), (d)	N/A	C	<p><b>Radiation detection instruments</b></p> <p>In W.104c., because the reference to an ANSI standard for instrument calibration is a revision to Part W, the rationale document should consider explaining why the particular ANSI standard is required to be utilized.</p>
4	W.51	10 CFR 39.51	N/A	D	<p><b>Use of sealed source in a well without surface casing</b></p> <p>W.51 states that the procedure must be approved by the Agency whereas NRC allows approval by the Commission or an Agreement State. Although a Compatibility Category D, SR-W should consider accepting procedures approved by the Agency, the Commission, or another Agreement State.</p>
5	W.402	10 CFR 39.69	N/A	C	<p><b>Radioactive contamination control</b></p> <p>W.402b.ii. states "Cause the decontamination in accordance with any agreement as required by W.4." The phrasing "cause the decontamination" is confusing and should be revised for clarification. The intent appears to be that the licensee can initiate or commence decontamination procedures in accordance with an agreement required by W.4. or can take steps to assure that decontamination is performed in accordance with an agreement required by W.4." The intent should be clarified to avoid conflict and confusion.</p>