

November 18, 2010

Ms. Alice Hamilton Rogers, P.E.
Interim Chairperson
Conference of Radiation Control
Program Directors, Inc.
1030 Burlington Lane, Suite 4B
Frankfort, KY 40601

Dear Ms. Rogers:

We have received your October 7, 2010, letter requesting withdrawal of Suggested State Regulations (SSR) Part T, "Transportation of Radioactive Material" from NRC's federal concurrence review. We have halted the review process of the regulations which were received by our office on August 27, 2010. As discussed between Kathleen Schneider of my staff and Earl Fordham, Chair of the Suggested State Regulation Council, we are providing those comments that the NRC had prepared prior to halting our review. Note our review was incomplete and did not have legal review. The August 2010 version was reviewed by comparison to the equivalent Nuclear Regulatory Commission (NRC) rules in 10 CFR Part 71 and Appendix A to 10 CFR 71.

As a result of our review, we have 17 comments that have been identified in the enclosure. Please note we have included both editorial comments and those comments on the regulations required for compatibility and/or health and safety. NRC will begin a fresh review for federal concurrence on the final SSR Part T regulations once approved by the CRCPD Executive Board and submitted to NRC.

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) or Dr. Janine F. Katanic, CHP, at (817) 860-8151 (Janine.Katanic@nrc.gov).

Sincerely,

/RA/

Robert J. Lewis, Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs

Enclosure:
As stated

cc: Robert Owen, SR-T Chair
Earl Fordham, SSR Council Chair

[Concurrence Page]

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COMPATIBILITY COMMENTS ON *CRCPD* SSRCR PROPOSED REGULATIONS

| SSRCR SECTION | NRC SECTION | RATS ID | CATEGORY | SUBJECT and COMMENTS |
|---------------|-------------|---------|----------|--|
| 1 T.2 | 71.4 | 2004-1 | [B] | <p>Definitions.</p> <p>Editorial: The definition for “A1” says “This value is either listed in Tables A-1, A-1, and A-3 in Appendix A of this Part...” It appears that the word “supplement” was omitted after the second “A-1”</p> |
| 2 T.2. | 71.4 | 2004-1 | [B] | <p>Definitions.</p> <p>The definitions for “natural uranium” and “enriched uranium” were omitted nor were the definitions found in Part A.</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.4.</p> |
| 3 T.2. | 71.4 | 2004-1 | [B] | <p>Definitions.</p> <p>A definition for “depleted uranium” was found in SSR Part A but it does not meet the Compatibility Category B designation assigned to this definition in 10 CFR 71.4.</p> <p>SSR Part T, Section T.2. either needs to include the appropriate definition for “depleted uranium” in Part T and address Part A later, or correct Part A.</p> |
| 4 T.4.(b) | 71.14(a) | 2004-1 | [B] | <p>Exemption for low-level materials.</p> <p>Editorial: Section T.4.(b)(ii) omits (in two places) the words “Table A-2” which would add clarity.</p> |
| 5 | T.5. | 71.5 | 2004-1 | <p>Transportation of Licensed Material</p> <p>Editorial: Section T.5.(a)(i)(2) says “Marking and labeling -49 CFR Part 172: Subpart D, §§ 172.400 through 172.407, §§ 172.436 through 172.441, and Subpart E.” It should say “49 CFR Part 172: Subpart D; and 172.400 through 172.407, and 172.436 through 172.441 of Subpart E.” This section should be revised to clarify the requirement.</p> |

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| | | | | <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.5.</p> |
| 6 T.10. | 71.22 | 2004-1 | [B] | <p>General license: Fissile material</p> <p>Part T, Table II, omits the column headings. The column headings “Uranium enrichment in weight percent U-235 not exceeding” and “Fissile material mass of U-235 (x) grams” need to be added.</p> <p>SSR Part T needs to make the above change in order to meet the Compatibility Category B designation assigned to 10 CFR 71.22.</p> <p>Editorial: The footnote for Part T, Table I, appears below Table II. For clarity, the footnote for Table I should be moved to just immediately below Table I, since it applies only to Table I and not Table II.</p> <p>Editorial: Part T, Table II, has a typographical error in the heading title. “Uranium-235T” should be “Uranium-235”</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.22.</p> |
| 7 T.11. | 71.23 | 2004-1 | [B] | <p>General license: PuBe special form material</p> <p>Section T.11.(d)(iii), adds the term “or storage incident to transport” in the parenthetical. This phrase needs to be deleted.</p> <p>SSR Part T needs to make the above change in order to meet the Compatibility Category B designation assigned to 10 CFR 71.23.</p> |

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| | | | | <p>Editorial: There is a typographical error in T.11.(e)(ii) – it appears that an extra l or 1 after the word “decimal.”</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.23.</p> |
| 8 T.15. | 71.47 | 2004-1 | [B] | <p>External radiation standards for all packages</p> <p>T.15.(j) omits the equivalent words from 71.47(a) “except as provided in paragraph (b) of this section., each package of radioactive materials offered for transportation must be designed and prepared for shipment so that under conditions normally incident to transportation.”</p> <p>T.15.(k) should reference T.15.(j), not T.15.(i).</p> <p>T.15.(k)(iv) adds the words “are provided with special health supervision, personnel radiation monitoring devices, and training in accordance with part J.12 of these regulations.” NRC’s regulations in 71.47(b)(4) only refer to personnel monitoring requirements, not supervision or training requirements. The language referring to special health supervision, and training should be deleted.</p> <p>Section T.15.(l) makes reference to the provisions of T.15.(j), but should make reference to T.15.(k).</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.47.</p> |

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| 9 T.14. | 71.85 | 2004-1 | [B] | <p>Preliminary determinations</p> <p>Editorial: T.14.(b) says (5 lb/in²) instead of the language in 71.85(b) which is (5 lbf/in²). Part T should specify lbf instead of lb to clearly distinguish between pounds force and pounds mass.</p> |
| 10 T.15. | 71.87 | 2004-1 | [B] | <p>Routine determinations</p> <p>10 CFR 71.87(i) refers to the limits specified in DOT regulations in 49 CFR 173.443. Section T.15.(i) instead provides some of the text of the requirement in 173.443 and the provides the table from that requirement. However, the language in T.15. does not completely parallel the language of 49 CFR 173.433 and the table provided in T.15. takes into account an assumed wipe efficiency without clearly explaining this change in the table. Part T needs to reference the requirements of 49 CFR 173.443 or incorporate the requirements and table without modification.</p> <p>In addition, T.15.(i)(i) and T.15.(i)(ii) refer to T.15.(h)(i) and T.15(h)(ii), which do not exist. The reference should be corrected.</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.87.</p> |
| 11 T.15. | 71.88 | 2004-1 | [B] | <p>Air transport of plutonium</p> <p>Section T.16.(a), (b), and (c) are missing the “or”s after the statements. Section T.16. needs to add the word “or” after (a), (b), and (c).</p> <p>SSR Part T needs to make the above change in order to meet the Compatibility Category B designation assigned to 10 CFR 71.88.</p> |
| 12 T.20. | 71.97 | 2004-1 | B | <p>Advance notification of shipment of irradiated reactor fuel and nuclear waste</p> |

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| | | | | | <p>Editorial: T.20.(b)(iii) omits the words “the least of the following:”</p> <p>T.20.(b)(iii)(1) and T.20.(b)(iii)(2) refer to Table I. It should instead refer to Table A-1.</p> <p>T.20.(d) substitutes the words “by messenger” for “any other means than mail.” This is more restrictive than NRC and should be deleted.</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71.97.</p> |
| 13 | Appendix A | Appendix A | 2004-1 | [B] | <p>Determination of A1 and A2</p> <p>Part T includes the sentence “The curie values are expressed to three significant figures to assure that the difference in the TBq and Ci quantities is one tenth of one percent or less.” This should be removed and should state that “The Terabecquerel values are the regulatory standard. The curie values are for information only and are not intended to be the regulatory standard.”</p> <p>Part T, Appendix A, II, regulation (a) and (b) refer to the “Agency” but (c) refers to “the Commission.” This should be corrected to “Agency” for consistency and to avoid conflict.</p> <p>Editorial: Part T, Appendix A, IV, in the part that should be designated “(b),” it says “where B(i) is the activity of radionuclide i and A1(i) and A2(i) are the A1 and A2 values for radionuclide respectively.” This should say “where B(i) is the activity of radionuclide i, and A2(i) is the A2 value for radionuclide i.”</p> <p>Editorial: Part T, Appendix A, IV, says “radionuclide I(b)” but should say “radionuclide i(b)” for consistency with the formula.</p> |

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| | | | | | <p>Editorial: Part T, Appendix A, IV, is missing (b) in front of the words “For normal form...”</p> <p>SSR Part T needs to make the above changes in order to meet the Compatibility Category B designation assigned to 10 CFR 71 Appendix A.</p> |
| 14 | Appendix A | Appendix A | 2004-1 | [B] | <p>Table A-1</p> <p>SSR Part T, Table A-1, need significant review. Note the following difference were noted and need to be changed in order to meet the Compatibility Category B designation assigned to 10 CFR 71 Appendix A. This list is not all inclusive and CRCPD should perform additional review on this table against the values in 49 CFR/10 CFR 71.</p> <ul style="list-style-type: none"> • Columns 4 and 6 are missing footnote (b) reference; this footnote reference needs to be added. • Footnote (b) is incorrect. The entire footnote (b) of Part T, Appendix A, Table A-1, needs to be removed and replaced with “The values of A1 and A2 in Curies (Ci) are approximate and for information only; the regulatory standard units are Terabecquerels (TBq), (see Appendix A to Part 71 – Determination of A1 and A2, Section I.” • Ar-39: A1 and A2 values need to be corrected • Bi-205: the Specific activity should be corrected to 1.5×10^3 Bq/g • The column entry for Calcium(20) was omitted and needs to be included. (It should be between Carbon(6) and Cadmium(48)) • The entire row for Ca-41 was omitted and needs to be included. • Cm-248: the Specific activity should be corrected to 1.6×10^{-4} TBq/g • Eu-150(long lived): A1 should be |

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| | | | | | <p>corrected to 7.0×10^{-1} TBq. In addition, the A2 value needs to be corrected.</p> <ul style="list-style-type: none"> • Ir-192: missing footnote reference (c) • Np-236(long-lived): A1 and A2 values need to be corrected • Te-132: specific activity should be corrected to 3.0×10^5 Ci/g • U-230(medium lung absorption): A2 value needs to be corrected • U-230(slow lung absorption): A1 and A2 values need to be corrected • The entire row for U-232(slow lung absorption) was omitted and needs to be included • U-232(medium lung absorption): A2 value needs to be corrected • U-233(medium lung absorption): A2 value needs to be corrected • U-233(slow lung absorption): A2 value needs to be corrected • Entries for U-234 (medium) and U-234 (slow) are missing the “U” in column 1 • U-234(medium lung absorption): A2 value needs to be corrected • U-234(slow lung absorption): A2 value needs to be corrected • U-236(medium lung absorption): A1 and A2 values need to be corrected • U-236(slow lung absorption): A1 and A2 values need to be corrected • U(enriched to 20% or less): Specific activity should refer to Table A-4 • U(dep): Specific activity should refer to Table A-4 • The entry for Ytterbium should say “Ytterbium(70)” not “Ytterbium (79)” |
| 15 | Appendix A | Appendix A | 2004-1 | [B] | <p>Table A-2</p> <p>SSR Part T, Table A-2, need significant review. Note the following difference were noted and need to be changed in order to meet the Compatibility Category B designation assigned to 10 CFR 71 Appendix A. This list is not all inclusive and CRCPD should perform additional</p> |

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| | | | | <p>review on this table against the values in 49 CFR/10 CFR.</p> <ul style="list-style-type: none"> • Footnote (a) is not applicable to Table A-2 and should be removed. References to footnote (a) should be removed from column 1. • Footnote (b), U_{nat} omits the following progeny: Pb-210, Bi-210, Po-210 • Footnote (c) is not applicable to Table A-2 and should be removed. References to footnote (c) should be removed from Table A-2. • When the footnotes are corrected, the footnote references in column 1 will need to be verified for consistency. • Eu-150(long-lived): value for activity concentration for exempt material needs to be corrected • Np-236(long-lived): value for activity concentration for exempt material and value for activity limit for exempt consignment needs to be corrected • Np-237, U-235(all lung absorption types), U-238(all lung absorption types) and U(nat), Zr-93, should have appropriate footnote reference • U-230(fast lung absorption): value for activity limit for exempt consignment will need to be corrected • U-230(medium lung absorption): value for activity limit for exempt consignment will need to be corrected • U-232(medium lung absorption): value for activity concentration for exempt material and value for activity limit for exempt consignment needs to be corrected • U-232(slow lung absorption): value for activity concentration for exempt material and value for activity limit for exempt consignment needs to be corrected |

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| | | | | | <ul style="list-style-type: none"> • U-233(medium lung absorption): value for activity concentration for exempt material and value for activity limit for exempt consignment needs to be corrected • U-233(slow lung absorption): value for activity limit for exempt consignment will need to be corrected • U-233(medium lung absorption): value for activity concentration for exempt material and value for activity limit for exempt consignment needs to be corrected • U-234(slow lung absorption): value for activity limit for exempt consignment will need to be corrected • U-236(medium lung absorption): value for activity concentration for exempt material and value for activity limit for exempt consignment needs to be corrected • The entry for Ytterbium should say "Ytterbium(70)" not "Ytterbium (79)" |
| 16 | Appendix A | Appendix A | 2004-1 | [B] | <p>Table A-4</p> <p>SSR Part T, Table A-4, in the row entry for 90, the Ci value should be corrected to 5.8×10^{-5}.</p> <p>SSR Part T needs to make the above change in order to meet the Compatibility Category B designation assigned to 10 CFR 71 Appendix A.</p> |
| 17 | Rationale document | N/A N/A | | N/A | <p>Rationale</p> <p>Editorial: Paragraph 3 on page 1 refers to "Office of State and Tribal Programs Internal Procedure B.7." but should reference "Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-200."</p> |