



Department of Energy
Washington, DC 20585

July 30, 2013

[Via Email – Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov)

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Rulemaking and Adjudications Staff

The Department of Energy (DOE) is pleased to provide comments in response to the Nuclear Regulatory Commission's (NRC) notice of proposed rule, 78 Federal Register 28988, dated May 16, 2013, *Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements* (NRC-2008-0198; NRC-2013-0082; RIN 3150-A111). I have attached a table with our comments and recommendations for the NRC's consideration.

DOE supports the NRC's proposal to amend its transportation regulations in 10 CFR Part 71 to maintain consistency and compatibility with the DOT regulations, and those of the International Atomic Energy Agency. We offer the attached comments with the goal of achieving additional consistency and clarity.

If you need additional information, please contact me at (301) 903-7854, or Mr. Ashok Kapoor of my staff at (202) 586-8307.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen O'Connor", written over a horizontal line.

Stephen C. O'Connor
Director
Office of Packaging and Transportation

Enclosure

U.S. Department of Energy (DOE) Comments on Nuclear Regulatory Commission (NRC) Notice of Proposed Rulemaking (RIN 3150-A111; NRC-2008-0198; NRC-2013-0082)

Revisions to Transportation Safety Requirements and Harmonization with the Regulations of the International Atomic Energy Agency (IAEA) Transportation Requirements (TS-R-1, 2009 Edition)

A Notice of Proposed Rulemaking (NPRM) was published on May 16, 2013 by the NRC to amend its regulations for the packaging and transportation of radioactive materials (10 CFR Part 71). DOE has reviewed the NPRM and offers the following comments for consideration.

SECTION	DISCUSSION/IMPACT	DOE RECOMMENDATION
<p>71.4 – Definitions “Contamination,” “Low Specific Activity (LSA) material,” “Uranium-natural, depleted, enriched,” and “Special form radioactive material”</p>	<p>NRC proposes to add a definition of “contamination” consistent with the definition of the Department of Transportation (DOT) in its NPRM (HM-250) issued on August 12, 2011 (76 Fed. Reg. 50332) and with TS-R-1. DOE supports the addition of such a “contamination” definition in the NRC packaging and transportation regulations.</p> <p>NRC also proposes to revise definitions of current terms -- “Low Specific Activity (LSA) material,” “Uranium-natural, depleted, enriched,” and “Special form radioactive material” -- in order to harmonize with the DOT’s HM-250 and with TS-R-1. DOE supports revisions to these definitions so that NRC is consistent with DOT and IAEA regulations.</p>	<p>DOE supports inclusion of new term “contamination” and proposed revisions to current terms (“Low Specific Activity (LSA) material,” “Uranium-natural, depleted, enriched,” and “Special form radioactive material”) as stated in the NPRM.</p>
<p>DOE proposal to add new term “Radiation level”</p>	<p>To be consistent with DOT, DOE proposes that NRC should also add the term “Radiation level” as defined by DOT in its HM-250:</p> <p><i>Radiation level</i> means the radiation dose-equivalent rate expressed in millisieverts per hour or mSv/h (millirem per hour or mrem/h). It consists of the sum of the dose equivalent rates from all types of ionizing radiation present including alpha, beta, gamma, and neutron radiation. Neutron flux densities may be used to determine neutron radiation levels according to Table 1....</p> <p>Harmonization of definitions of both “contamination” and “radiation level” with DOT will help NRC licensees and carriers transporting shipments for NRC licensees in effective implementation of the requirements in section 10 CFR 71.87, “Routine determinations,” prior to each shipment of licensed material. This section requires determinations that radioactive contamination and radiation levels comply with limits in 10 CFR 71.47 and DOT regulations in 49 CFR 173.443.</p>	<p>DOE recommends adding a new definition to 71.4:</p> <p><i>Radiation level</i> means the radiation dose-equivalent rate expressed in millisieverts per hour or mSv/h (millirem per hour or mrem/h). It consists of the sum of the dose equivalent rates from all types of ionizing radiation present including alpha, beta, gamma, and neutron radiation. Neutron flux densities may be used to determine neutron radiation levels according to Table 1....</p>

SECTION	DISCUSSION/IMPACT	DOE RECOMMENDATION
<p>71.15- Exemption from classification as fissile materials</p> <p>(d)- Uranium enriched in uranium-235 to a maximum of 1 percent by weight, and with total plutonium and uranium-233 content of up to 1 percent of the mass of uranium-235, provided that the mass of any beryllium, graphite, and hydrogenous material enriched in deuterium constitutes less than 5 percent of the uranium mass, and that the fissile material is distributed homogeneously and does not form a lattice arrangement within the package.</p>	<p>Homogeneity and lattice arrangement are not defined and impractical to apply without further clarification.</p>	<p>DOE recommends that clarifying language be provided relating to prevention of latticing and also homogeneity as it relates to the exemption for uranium enriched up to 1%.</p> <p>DOE notes that similar language to the proposed language existed in earlier versions of the regulations, and it was recommended in NUREG/CR-5342 that the terms "lattice arrangement" and "homogeneity" either be removed or defined.</p>

From: [Kapoor, Ashok](#)
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Subject: DOE Comments on the NRC Rulemaking Notice (NRC-2008-0198; NRC-2013-0082) RIN 3150-AI11
Date: Tuesday, July 30, 2013 9:05:27 AM
Attachments: [DOE Comments_NRC NPRM_07_30_2013.pdf](#)

Rulemaking and Adjudications Staff,

Attached please find DOE comments in response to the Nuclear Regulatory Commission's notice of proposed rule, dated May 16, 2013, *Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements* for your consideration

Thanks.

Ashok

*Ashok Kapoor, Safety Engineer, STSM
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