

April 12, 2011 (10:15 am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

16

April 10, 2011

Secretary, US Nuclear Regulatory Commission

Comments on Proposed Rule on Spent Fuel Shipment Security – Docket ID: NRC-2009-0163

I support the NRC's proposed rule updating spent nuclear fuel (SNF) transportation security requirements that was published on October 13, 2010 (75 FR 62695); and recommend publication of a final rule subject to the following comments.

1. In FRN pages 62702 and 62703, Sections III.O and III.P of the Supplementary Information, the NRC has discussed the differences between NRC and DOE approaches on security requirements for SNF shipments. However, the NRC has indicated that the DOE has independent authority to establish transportation security requirements under the Atomic Energy Act of 1954. While this is generally true, it is not true in all circumstances. For example, the NRC regulates a small number of DOE-operated facilities (two independent spent fuel storage installations (ISFSIs) in Idaho and one in Colorado; and a mixed-oxide fabrication facility in South Carolina). Shipments of SNF to or from these ISFSIs are fully subject to NRC oversight, especially regarding advance shipment notifications and safeguards event notifications of actual or imminent hostile actions. However, the current language in 10 CFR 73.6(d) exempts shipments made using DOE's OST (to or from NRC licensed facilities) from NRC recordkeeping and advance notification requirements. This is inappropriate. The NRC and DOE have the technology to communicate classified information on such SNF shipments to each other by e-mail and voice (e.g., HSDN, SIPRNet, or STE). Secondly, DOE's voluntary compliance with NRC regulations for shipments made under DOE's auspices, is not the same as NRC independent regulatory oversight of DOE shipments that fall under NRC's regulatory purview. Thirdly, for shipments that fall under the NRC's regulatory purview, NRC inspectors' review of associated records is both appropriate and necessary. **Recommendations:** 1) Clarify in the preamble to the final rule that NRC can regulate certain aspects of shipments to or from NRC regulated facilities licensed to the DOE. 2) Revise § 73.6(d) to remove the exemption to §§ 73.70 and 73.72 for shipments made to or from an NRC-regulated facility using a DOE transport system.
2. In FRN page 62715, item 4, the NRC's proposed changes to "§ 73.71" in both the amendatory language and the title of the section. This information is incorrect and should instead refer to 10 CFR 73.72 (i.e., § 73.71 is not discussed in this FRN and is not within the scope of this rulemaking). **Recommendation:** Refer to § 73.72.
3. In FRN page 62715, § 73.72(a)(1), the NRC continues the practice of requiring advance notifications to be made in writing. With the widespread use of 20th century technology, the NRC should take advantage of the encryption, authentication, and non-repudiation features found in secure electronic communications to provide greater timeliness and security over SNF shipment notifications made to the NRC under this section. Both the NRC and NRC-licensees possessing SNF send secure electronic communications containing Safeguards Information to and from each other on a routine basis. These capabilities should also be used for SNF shipment notifications, with written communications reserved for a backup role (i.e., secure electronic communications are inoperable). The NRC should specify in the supporting guidance documents the specific methodology licensees should use to meet FIPS 140-2 or NSA standards to communicate Safeguards Information or classified information, respectively. The NRC should also specify the e-mail addresses to send these notifications (both intranet and secure networks). This should include use of secure electronic networks such as SLES, HSDN, or SIPRNet; or the use of encrypted e-mails (e.g., using PGP software) transmitted over the internet. While this may require preplanning and

coordination by licensees to obtain the correct encryption software or devices, this proposed requirement is not unreasonable or excessively burdensome. **Recommendations:** 1) Revise § 73.72(a)(1) to require secure electronic transmission of advance notifications made under this section. Secure notifications should be sent to the e-mail addresses specified in 10 CFR Part 73, Appendix A, for the NRC Headquarters Operations Center. 2) Provide an exception to this new requirement permitting the use of written notifications (sent by U.S. mail or private courier service) only if secure electronic communications methodologies are inoperable or unavailable. Specify acceptable encryption methods (both networks and internet e-mails) in regulatory guidance to achieve greater consistency and ease of use across the range of recipients.

4. In FRN page 62711, § 73.37(b)(4)(iv), the contingency response procedure requirements do not specify the licensee should notify the NRC in accordance with the security event notification requirements of 10 CFR 73.71 (e.g., for events involving threats, loss or theft of SNF, imminent or actual hostile actions, unauthorized entry into a transport vehicle or shipment package, or suspicious activities). The NRC recently issued a proposed rule revising the safeguards event notification requirements for transportation (76 FR 6200; 2/3/2011, see § 73.71 and Appendix G to Part 73). To avoid confusion, § 73.37 should cross reference § 73.71. **Recommendation:** Add a new subparagraph (F) after § 73.37(b)(iv)(E) to require licensees (or their monitoring center) to notify the NRC of transportation safeguards events in accordance with § 73.71.
5. In FRN pages 62711 and 62712, § 73.37(c)(6) and (d)(4), the movement control center requirements should also include language to notify the NRC in accordance with the security event notification requirements of 10 CFR 73.71 (e.g., for events involving threats, loss or theft of SNF, imminent or actual hostile actions, unauthorized entry into a transport vehicle or shipment package, or suspicious activities). See also Comment 4. **Recommendation:** Add new subparagraphs (c)(7) and (d)(5) to require licensees (or their monitoring center) to notify the NRC of transportation safeguards events in accordance with § 73.71.
6. In FRN page 62712, § 73.37(e), the proposed regulations do not include requirements for a movement control center to monitor sea mode shipment of SNF. However, a movement center is referenced in paragraph (e)(4). Additionally, paragraph (e) does not include requirements for telemetric position monitoring, as is required for road and rail modes of SNF shipments under proposed § 73.37(c) and (d). Telemetric position monitoring is both reasonable and necessary for sea mode shipments within the territorial waters of the U.S. For import and export shipments this can be accomplished via a vessel tracking service, e.g. "Pole Star." Moreover, the NRC does not appear to have considered SNF shipments made by barge – which fall under the sea mode of transportation. Shipments made by barge are highly likely, but of small number. The DOE's Office of Civilian Radioactive Waste Management, as part of its planning efforts for the shipment campaign to the proposed geological repository at Yucca Mountain, identified that several NRC-regulated power reactors would have to initially transport SNF by barge, before transferring to rail or road modes of shipment. This was due to limitations on road and rail access to these reactor sites. **Recommendations:** 1) Specify requirements in § 73.37(e) for telemetric position monitoring for sea mode SNF shipments within U.S. territorial waters. However, permit import and export SNF shipments to be tracked by vessel monitoring systems or by U.S. Coast Guard monitoring and response capabilities. 2) Specify requirements for a movement monitoring center similar to the language proposed in § 73.37(c) and (d). 3) Specify language to require licensees (or their monitoring center) to notify the NRC of transportation safeguards events in accordance with § 73.71.

7. In FRN page 62712, § 73.37(f), the proposed language on “lost or unaccounted for” SNF shipments seems inconsistent with the NRC’s other proposed requirements that SNF shipments are tracked by telemetric position monitoring and monitored by a “movement center.” Loss of information on a SNF shipment would appear to be grounds to enter contingency response procedures and notify the NRC in accordance with the safeguards events notification requirements of § 73.71 and Appendix G to Part 73. However, the proposed language in paragraph (f) appears more appropriate for byproduct material shipments falling under the RAMQC transportation security requirements, not SNF shipment security requirements. Separately, the NRC’s proposed rule for § 73.71 (76 FR 6200; 2/3/2011) requires the licensee (or its movement center) to establish a continuous communications channel with the NRC for certain security events. The language to immediately “conduct an investigation” appears inconsistent with the level of seriousness conveyed by NRC’s proposed changes to § 73.71. **Recommendation:** Delete paragraph (f) and accomplish any investigation of lost or unaccounted SNF in accordance with the NRC’s proposed revisions to § 73.71.

8. In FRN page 62709, § 73.37(a), the proposed language refers to a “total external radiation dose rate in excess of 1 Sv (100 rems) per hour at a distance of 0.91 meters (3 feet) from any accessible surface without intervening shielding...” This is colloquially known as the “self-protecting” standard. Additionally, on page 62708, Section VIII, the NRC indicates it is not establishing a voluntary consensus standard (i.e., the “use of technical standards developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or impractical.”) However, IAEA standard INFCIRC/225/Rev 4, Table 5, uses a standard of radiation level of greater than 1 Gray at 1 meter (1 Gray = 100 rad); versus adsorbed dose greater than 1 Sievert (Sv) at 1 meter (1 Sv = 100 rem). Both radiation level and dose are measured in rates with per hour units. However, the unit of adsorbed dose is much more subjective as values increase to more significant biological impacts. Secondly, the Commission’s metrification policy indicates that the metric units should be in whole numbers, with the English units in decimal equivalents, thereafter. Therefore, the distance should be specified at 1 meter (3.28 feet); versus 0.91 meters (3 feet). This revised language would be consistent with the NRC’s more recent language on enhanced weapons that addresses the same “self-protecting” standard in 10 CFR 73.18(c)(1)(ii) (see 76 FR 6200; 2/3/2011, at 6233). **Recommendation:** Revise paragraph (a) to read as follows “...which has a total external radiation level greater than 1 Gray (100 rad) per hour at a distance of 1 meter (3.28 feet) from any accessible surface, without regard to any intervening shielding, ...”

9. In FRN 62710, § 73.37(b)(2)(i), the NRC is proposing to continue the practice of written notifications of SNF shipments to Governors and their designees of states traversed by the shipment route. However, the NRC should also obtain information to permit the secure electronic transmission of shipment advance notification information. While under Comment 3 above, we are recommending that the NRC require licensees provide advance notifications electronically to the NRC, we suggest States have greater flexibility. However, the use of secure electronic communications (either via secure networks (SLES, HSDN, or SIPRNet) or via encrypted e-mails over the internet) is preferred and should be encouraged. **Recommendation:** Revise paragraph (b)(2)(i) to permit both encrypted electronic and written advance notifications. Specify acceptable encryption methods (both networks and internet e-mails) in regulatory guidance to achieve greater consistency and ease of use across the range of recipients.

S. Hardin, Mt Airy, MD

PUBLIC SUBMISSION

As of: April 12, 2011
Received: April 11, 2011
Status: Pending_Post
Tracking No. 80c21d44
Comments Due: April 11, 2011
Submission Type: Web

Docket: NRC-2009-0163
Safeguarding Shipments of Spent Fuel

Comment On: NRC-2009-0163-0010
Physical Protection of Irradiated Reactor Fuel in Transit; Extension of Comment Period

Document: NRC-2009-0163-DRAFT-0017
Comment on FR Doc # 2011-00214

Submitter Information

Name: S Hardin
Address:
Box 2500
Mt Airy, MD,

General Comment

See attached file(s)

Attachments

NRC-2009-0163-DRAFT-0017.1: Comment on FR Doc # 2011-00214

Rulemaking Comments

From: Gallagher, Carol
Sent: Tuesday, April 12, 2011 9:17 AM
To: Rulemaking Comments
Subject: Comment on Proposed Rule - Physical Protection of Irradiated Reactor Fuel in Transit
Attachments: NRC-2009-0163-DRAFT-0017.pdf

Van,

Attached for docketing is a comment from S. Hardin on the above noted proposed rule (3150-AI64; 75 FR 62695) that I received via the regulations.gov website on 4/11/11.

Thanks,
Carol