



SECRETARY

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

June 7, 2012

COMMISSION VOTING RECORD

DECISION ITEM: SECY-12-0009

TITLE: FINAL RULE: 10 CFR 73.37, "PHYSICAL PROTECTION OF IRRADIATED FUEL IN TRANSIT" (RIN 3150-AI64)

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of June 7, 2012.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Jaczko
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
OGC
EDO
PDR

VOTING SUMMARY - SECY-12-0009

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. JACZKO	X				X	4/27/12
COMR. SVINICKI	X				X	5/24/12
COMR. APOSTOLAKIS	X				X	5/14/12
COMR. MAGWOOD	X				X	5/15/12
COMR. OSTENDORFF	X				X	4/17/12

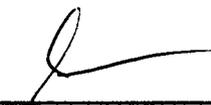
AFFIRMATION ITEM

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Chairman Gregory B. Jaczko
SUBJECT: SECY-12-0009 – FINAL RULE: 10 CFR 73.37,
“PHYSICAL PROTECTION OF IRRADIATED FUEL IN
TRANSIT” (RIN 3150-AI64)

Approved X Disapproved _____ Abstain _____
Not Participating _____

COMMENTS: Below _____ Attached X None _____



SIGNATURE

4/27/12.

DATE

Entered on “STARS” Yes X No _____

**Chairman Jaczko's Comments on SECY-12-0009,
"Final Rule: 10 CFR 73.37, Physical Protection of Irradiated Fuel in Transit"**

I approve the staff recommendation to publish 10 CFR 73.37, "Physical Protection of Irradiated Fuel in Transit," subject to the edits provided in Commissioner Ostendorff's vote.

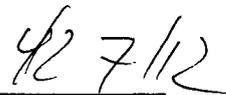
I am pleased that the staff has succeeded in meeting the primary intent of this rulemaking, which was to codify Orders for physical protection of irradiated fuel in transit issued after the terrorist attacks of September 11, 2001. The staff added several new requirements that will mitigate potential security vulnerabilities and reduce the likelihood of a successful attack on irradiated fuel in transit. These improvements, which are the result of careful analysis of data from security assessments, will make the transportation of irradiated fuel safer and more secure.

I would also like to thank the staff for their work with Department of Transportation (DOT) to ensure that NRC requirements do not conflict with DOT requirements, and the staff's efforts to clarify the distinctions in requirements so that NRC regulations are clear and understandable to the public.

I agree with Commissioner Ostendorff that the statements of consideration and the guidance document should explain that the clarifications to the definition of radiological sabotage do not change the level of security required during spent fuel shipments. Further, these documents should explain that the clarifications should not be construed as a change to the definition of sabotage.



Gregory B. Jaczko



Date

AFFIRMATION ITEM

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER SVINICKI
SUBJECT: SECY-12-0009 – FINAL RULE: 10 CFR 73.37,
“PHYSICAL PROTECTION OF IRRADIATED FUEL IN
TRANSIT” (RIN 3150-AI64)

Approved XX Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached XX None _____


SIGNATURE

05/24/12
DATE

Entered on “STARS” Yes No _____

**Commissioner Svinicki's Comments on SECY-12-0009
Final Rule: 10 CFR 73.37, "Physical Protection of
Irradiated Fuel in Transit" (RIN 3150-A164)**

I approve the draft final rule for 10 CFR Part 73.37, "Physical Protection of Irradiated Fuel in Transit" as supplemented by the correction notice dated April 12, 2012, and subject to the edits to the *Federal Register* Notice proposed by Commissioner Ostendorff and the additional attached edits. I also certify that this rule will not have a significant impact on a substantial number of small entities to satisfy the requirement of the Regulatory Flexibility Act, 5 U.S.C. 605(b). I approve rescinding the Orders for spent nuclear fuel in transit on the effective date of the final rule in accordance with the Rescission Plan for Orders as provided in Enclosure 2 to SECY-12-0009.

I join my fellow Commissioners in agreeing with Commissioner Ostendorff that the statements of consideration and guidance document should explain that the clarifications to the definition of radiological sabotage, as that definition pertains to the protection of spent fuel during transportation, do not change the level of security required during spent fuel shipments and that these documents should explain that the clarifications should not be construed as a change to the definition of sabotage as it more broadly applies to other provisions of 10 CFR Part 73.


Kristine L. Svinicki 05/24/12

1. What is the Role of the NRC in SNF Shipments?

The NRC regulates commercial SNF shipments in terms of both safety and security. Safety involves the protection of public health and safety during transport, while security relates to the protection of shipments against deliberate, malevolent acts. The NRC and the U.S. Department of Transportation (DOT) share Federal regulatory responsibility for SNF transportation safety. The NRC and DOT have signed a memorandum of understanding (MOU) (44 FR 38690; July 2, 1979) that delineates their respective responsibilities for regulating the transport of radioactive materials, which includes SNF shipments. Generally, the NRC regulates the design and construction of SNF shipping containers for domestic and foreign packages used to transport SNF solely within the U.S. Although DOT is the lead government agency responsible for the approval of export and import packages, it relies on the NRC's evaluation as the basis for approval of these packages. In addition, the NRC regulates the physical protection of commercial SNF in transit against sabotage or other malicious acts, which are recognized in the MOU and DOT routing regulations in Title 49 of the CFR (49 CFR) 397.101. The NRC requirements in 10 CFR Part 73 are applied to these shipments of SNF. The NRC fact sheet on transportation of radioactive materials can be found at:

<http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/transport-spenfuel-radiomats-bg.html>.

2. What is the Role of DOT in Commercial SNF Shipments?

The DOT has the primary responsibilities, in consultation with the NRC, for issuing the safety requirements for the carriers of SNF and for establishing the conditions of transport, such as routing, handling and storage incidental to transport, and vehicle and driver requirements, which are reflected in the MOU. The DOT also regulates the labeling, classification, and marking of all SNF packages and transport vehicles, and carrier-generated transport security plans.

continuous and active monitoring of SNF shipments, but a particular tracking method is not specified.

Another difference between the NRC and DOE requirements is the protection of SNF shipment information. For the NRC, information associated with an SNF shipment (i.e. shipment schedules and security plans) is protected as Safeguards Information (SGI) as specified by the requirements of §§ 73.21 and 73.22. Although DOE does not have the designation SGI, the DOE Manual in Section 6.0, Security provides, "This information may require protection as Safeguards Information under NRC regulations or as Unclassified Controlled Nuclear Information (~~UCNI~~) or Official Use Only (~~OUO~~) under DOE regulations. Unauthorized disclosure of any of the above levels of information is a violation of the AEA and other legal authorities." As such, DOE directs movement control personnel to use NRC's SGI protection or comparable DOE security measures for the protection of SNF shipment information.

6. What are the Roles of State and Local Governments?

State and local officials play an important role in SNF transportation. States have an important responsibility for enforcing the DOT highway safety regulations concerning federal motor carrier safety and hazardous materials transportation. Highway shipments of SNF are subject to State inspections. State enforcement officials can stop and inspect vehicles for compliance with Federal and State transportation requirements regarding equipment, documentation, and driver fitness. States can also require carriers to obtain special permits to operate these vehicles.² State and local governments assist in route planning and provide LLEA personnel as armed escorts. The State and local governments are also responsible

² National Research Council of the National Academies, Committee on Transportation of Radioactive Waste, *Going the Distance? The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States*, 2006, pp. 53-54.

On November 3, 2010 (75 FR 67636), the NRC published for public comment a revision to NUREG-0561. In order to allow the public sufficient time to review and comment on the draft revision, the NRC extended the comment period for the draft guidance document from February 11, 2011, until May 11, 2011. The NRC will publish in the *Federal Register* a notice of the availability of the revised NUREG-0561 shortly after the publication of the final rule.

G. What is Requested by the State of Nevada in its Petition for Rulemaking (PRM-73-10)?

By a letter dated June 22, 1999, the State of Nevada (the petitioner) submitted a rulemaking petition (docketed as PRM-73-10) requesting that the NRC strengthen its regulations for the physical protection of SNF shipments against radiological sabotage and terrorist acts. The NRC published for public comment a notice of receipt of PRM-73-10 on September 13, 1999 (64 FR 49410). The Commission review of this petition was tabled following the terrorist attacks of September 11, 2001.

In PRM-73-10, the State of Nevada requested that NRC: 1) clarify the meaning of the term "hand-carried equipment" in § 73.1(a)(1)(i)(D); 2) clarify the definition of the term "radiological sabotage" in § 73.2 to include actions against SNF shipments ~~which~~that are intended to cause a loss of shielding, release of radioactive materials or cause economic damage or social disruption, regardless of the success or failure of the action; 3) amend the advance route approval requirements in § 73.37(b)(1)(vi) to require shippers and carriers of SNF to identify primary and alternative routes which avoid heavily populated areas; 4) require armed escorts along the entire road shipment route by eliminating the differential based on population in § 73.37(c); 5) require armed escorts along the entire rail shipment route by eliminating the

terrorism by decreasing safety is not wise. The RAMTASC agreed with NRC's decision to not incorporate specific routing requirements into the rule.

A commenter from a State organization (Western Interstate Energy Board (WIEB)) indicated, relative to request 3 of PRM-73-10, that they agreed that ~~each of the several~~ routing criteria in the proposed rule would generally reduce risk, including the risk of radiological sabotage. However, WIEB indicated that the criteria may cause conflicts in certain situations. For example, WIEB indicated, similar to the RAMTASC's comments, that it may be necessary for SNF rail shipments to go through heavily populated areas in order to reduce travel time and overall risk to the shipment because better quality rail track may go through urban areas.

NRC's Response to the Request 3 Comments:

The comments indicated support for NRC's approach to request 3 of PRM-73-10, minimize movement of SNF through heavily populated areas. The comments do not require any change to the rule language, which is further discussed in Section III, "Summary and Analysis of Public Comments on the Proposed Rule, Issues 17 and 40 of this document.

Requests 4 and 5 of PRM-73-10: The existing regulations in §§ 73.37(c) and (d) for road and rail shipments, respectively, require armed escorts in heavily populated areas, but not in other areas along the route. The PRM-73-10 requested that the NRC eliminate these differential armed escort requirements based upon population for both road and rail SNF shipments.

Sections 73.37(c) and (d) were revised to reflect these PRM-73-10 requests. The differentiation of security requirements based upon population causes potential areas of vulnerability along the shipment route for theft, diversion, or radiological sabotage. The rule

H. Why Require Procedures and Training for the Security of SNF In Transit?

Sections 73.37(b)(3)(v) and (b)(4) require that licensees shipping SNF develop normal operating and contingency procedures. These procedures are to cover notifications, communication protocols, loss of communication and responses to actual, attempted, or suspicious activities. The revisions also require drivers, accompanying personnel, railroad personnel and other movement control personnel to be adequately trained in normal operating and contingency procedures. These requirements will ensure that all personnel associated with the shipment are properly trained and prepared to perform their roles and responsibilities relative to the physical protection of SNF in transit. These revisions address, in part, requests 3 and 6 of PRM-73-10.

I. Why Require a Telemetric Position Monitoring System or an Alternative Tracking System for Continuous Monitoring of SNF Shipments?

The current rule, § 73.37(b)(4), requires that the licensee's physical protection ~~plan~~ system ~~to~~ include a communications center, which is staffed continuously by at least one individual who monitors the progress of the SNF shipment. The revisions reflect the availability of new technology that can provide licensees more active control over the shipment. The revisions in § 73.37(b)(3)(i) replace the term "communications center" with the term "movement control center." The term "movement control center" is used for consistency with physical protection terminology in other parts of the regulations and to better define the role and responsibilities of the facility. The movement control center is defined in § 73.2. Section

addressed under Issues 19, 20, 32, and 40. The Private Citizen-Hardin's comments are discussed under Issues 3, 8, 34, 39, 42, 43, 44, 49, and 50.

Comment 9: The RAMTASC stated that they were hopeful that the final rule would ensure objective security and safety criteria for SNF shipments, and that it would ensure that political influence on route selection would be minimized.

Comment 10: Nuclear Infrastructure Council (~~NIC~~) indicated that they were hopeful that the final revised rule will support increased security without negative effects on safety, or unnecessary constraints on industry operations. They were also hopeful that the final rule will ensure that objective security and safety criteria are used for routing decisions and that political influence on route selection is minimized.

Responses to Comments 9-10: The NRC agrees that the final rule would support increased security of SNF in transit. The NRC also agrees that the rule's provisions, especially those relative to preplanning and coordination, provides a framework within which licensees, common carriers, along with Federal, State and local authorities can work together to develop effective plans and protocols to assure the security of SNF in transit.

Issue 2: Radiological Sabotage Definition § 73.2

Comment: One commenter from RAMTASC stated that the NRC did not specifically address economic or social disruption, but did expand the definition of radiological sabotage to include theft and diversion in the guidance document for the rule. The commenter indicated that caution would be needed in the way protection against theft or diversion of shipments is pursued; that the security role should remain the province of specially trained security escorts required for all shipments; and that security response training of other shipment personnel should be limited to ensuring they understand the authority and responsibility of the armed

personnel were subject to the new requirements.

Comment 6: The IEMA agrees with the NRC's proposal regarding background checks for licensees as set forth in § 73.38, "Personnel access authorization requirements for irradiated reactor fuel in transit." However, the IEMA believes that the requirement for background checks should include all entities that are involved with SNF shipments including Governor's designee and any State or Tribal entity that is entrusted with Safeguards Information, aids in the planning and coordination of an SNF shipment or has unescorted access to an SNF shipment. The LLEA personnel would continue to be exempted since they require a pre-employment background check. Under the proposed rule, all other entities involved with the totality of an SNF shipment should be required to comply with the background investigation requirement. The IEMA believes by requiring State and Tribal personnel to be held to the same access authorization requirements as licensees, an increased level of shipment security will be achieved.

Response to Comments 1 - 6: The NRC agrees that further clarification is needed relative to the persons subject to background investigations. Common carriers have no direct responsibilities under § 73.38. The licensee is responsible for assuring that all individuals who have access to Safeguards Information pertaining to a SNF shipment or unescorted access to the SNF shipment have undergone a background investigation (or fall under one of the categories for relief in §§73.59 or 73.61), have been determined to be trustworthy and reliable, and have a need to know. With regards to the receipt of Safeguards Information by Native American Tribes, this issue is ~~being~~was addressed as a part of a separate rulemaking entitled, "Advance Notification to Native American Tribes of Transport of Certain Types

of Nuclear Waste," which was ~~published as a proposed rule for public comment on December 8, 2010 (75 FR 75641)~~ approved by the Commission on January 30, 2012.

The NRC acknowledges that the licensee does not directly control a common carrier used to ship SNF or control whom the carrier employs. However, as noted in the comments, carriers are subject to DOT regulations that require fingerprinting and an FBI criminal history check for drivers transporting hazardous material. Spent nuclear fuel is considered to be a hazardous material under DOT regulations. The vehicle driver and accompanying personnel were included in part because they have access to SGI information pertaining to the SNF shipment. Whether these individuals come under the § 73.38 access authorization program or not, they would still need to be fingerprinted and determined to be trustworthy and reliable under the requirements of § 73.22(b). However, the NRC has revised § 73.38 to reflect that those individuals who have already completed an equivalent separate Federal background investigation program, and can provide documentation indicating that they are in good standing, could meet the requirements of § 73.38.

The NRC also agrees that further clarification is needed relative to the application of the provision to Federal and State inspectors and has added clarifying language. In response to the comments concerning background investigations for Governor's designees and LLEA personnel, § 73.59 relieves these persons from the background investigation requirements for access to Safeguards Information and § 73.61 relieves these persons from background investigation for unescorted access to SNF in transit. This section was revised to include a reference to § 73.61.

With regards to persons who receive Safeguards Information, all persons are required to obtain a background investigation unless they fall under one of the categories for relief in § 73.59. The rule has been revised to reflect the provisions in § 73.59(k) which relieves from a

program are trustworthy and reliable. Section 73.38(c)(1) specifies the individuals subject to the access authorization program. Section 73.38(c)(2) clarifies that individuals listed in §§ 73.59 and 73.63 that are relieved of the investigative elements of the SNF access authorization program.

Section 73.38(d) establishes the background investigation requirements for individuals seeking unescorted access or access authorization relative to SNF in transit. For an individual seeking unescorted access or access authorization relative to SNF in transit, §§ 73.38(d)(1) through (9) require licensees to conduct fingerprinting and an FBI identification and criminal history records check; verification of true identity; employment history evaluation; verification of education; military history verification; credit history evaluation; criminal history review; character reputation and determination; and obtain independent information, respectively. Section 73.38(d)(10) allows a licensee to rely upon an alternate source that has not been previously used, if the licensee cannot obtain information on an individual from their previous employer, educational institution, or any other entity with which the individual claims to have been engaged. Section 73.38(d)(10) is patterned after § 73.56(d)(4)(iv)(B).

Section 73.38(e) requires licensees to make and document trustworthiness and reliability determinations after obtaining and evaluating the information required by §§ 73.38(d)(1) through (9). Licensees will be required to maintain records of trustworthiness and reliability for 5 years from the date the individual no longer requires unescorted access or access authorization relative to SNF shipments.

Section 73.38(f) requires licensees to protect the information obtained during background investigations, while allowing licensees to transfer background information on an individual to another licensee if the individual makes a written request for such transfer. Section 73.38(f) allows a licensee to rely on the background information transferred from

§ 73.22(f)(1), in a separate enclosure to the written notification:

(A) The estimated date and time of departure from the point of origin of the shipment;

(B) The estimated date and time of entry into the State or Tribal reservation;

(C) The estimated date and time of arrival of the shipment at the destination;

(D) For the case of a single shipment whose schedule is not related to the schedule of any subsequent shipment, a statement that schedule information must be protected under the provisions of §§ 73.21 and 73.22 until at least 10 days after the shipment has entered or originated within the State or Tribal reservation; and

(E) For the case of a shipment in a series of shipments whose schedules are related, a statement that schedule information must be protected under the provisions of §§ 73.21 and 73.22 until 10 days after the last shipment in the series has entered or originated within the State or Tribal reservation, and an estimate of the date on which the last shipment in the series will enter or originate within the State or Tribal reservation.

(iv) *Revision notice.* A licensee shall notify by telephone a responsible individual in the office of the governor or in the office of the governor's designee and the office of the Tribal official or in the office of the Tribal official's designee of any schedule change that differs by more than 6 hours from the schedule information previously furnished under § 73.37(b)(2)(iii), and shall inform that individual of the number of hours of advance or delay relative to the written schedule information previously furnished.

(v) *Cancellation notice.* Each licensee who cancels a shipment for which advance notification has been sent shall send a cancellation notice to the governor or to the governor's designee of each State previously notified, each Tribal official or to the Tribal official's designee previously notified, and to the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

AFFIRMATION ITEM

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner Apostolakis
SUBJECT: SECY-12-0009 – FINAL RULE: 10 CFR 73.37,
“PHYSICAL PROTECTION OF IRRADIATED FUEL IN
TRANSIT” (RIN 3150-AI64)

Approved X Disapproved Abstain

Not Participating

COMMENTS: Below Attached X None



SIGNATURE

5/14/12

DATE

Entered on “STARS” Yes No

Commissioner Apostolakis' Comments on SECY-12-0009 FINAL RULE: 10 CFR 73.37,
PHYSICAL PROTECTION OF IRRADIATED FUEL IN TRANSIT

I approve publication of the final rule, and I approve rescinding the Orders for spent nuclear fuel in transit on the effective date of the final rule in accordance with the Rescission Plan for Orders subject to the following.

- Staff should revise the *Federal Register* Notice to reflect the self-protecting standard radiation dose contained in the IAEA standard for physical protection of nuclear material –INFCIRC/225/Rev. 4. Therefore, the radiation dose of 1 Gray (100 rad) per hour at 1 meter (3.3 feet)" should be used.
- For purposes of consistency, staff should also revise the footnotes in Appendix M to Part 110 – "Categorization of Nuclear Material" to reflect the self-protecting standard radiation dose contained in the IAEA standard for physical protection of nuclear material – INFCIRC/225/Rev. 4, as part of this final rule or during a future revision to the regulation.
- Staff should revise the responses to comments, e.g., Issue 18, on pages 87 and 88, to reflect that the "Advance Notification to Native American Tribes of Transportation of Certain Types of Nuclear Waste" is final.
- Staff should revise the text on page 125, item (v) to include the "Tribal official or the Tribal official's designee" after "State".
- Staff should include the edits and clarifications proposed by Commissioner Ostendorff in his April 17th vote.

AFFIRMATION ITEM

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER MAGWOOD
SUBJECT: SECY-12-0009 – FINAL RULE: 10 CFR 73.37,
“PHYSICAL PROTECTION OF IRRADIATED FUEL IN
TRANSIT” (RIN 3150-AI64)

Approved Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below Attached _____ None _____

I approve the staff's request to publish a final rule in the *Federal Register* that would amend the security requirements for irradiated fuel in transit in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73 subject to the attached edits. I also approve staff's recommendation to rescind the Orders for Spent Nuclear Fuel in Transit on the effective date of the final rule in accordance with the Rescission Plans for Orders.

Finally, I agree with Commissioner Ostendorff that the statements of consideration and the guidance document should be revised to make it clear that the definition of sabotage is not being changed.



SIGNATURE

15 May 2012

DATE

Entered on “STARS” Yes No _____

for providing the first line of government response to accidents and incidents within their jurisdiction.

II. Discussion

A. What Action is the NRC Taking in this Rule?

The NRC is amending its security regulations for the transport of irradiated reactor fuel. This rulemaking establishes generically applicable security requirements and performance standards and objectives for the protection of SNF shipments from theft, diversion, or radiological sabotage. These new security requirements are similar to those requirements currently imposed by NRC Order EA-02-109. Additionally, this rulemaking addresses, in part, a 1999 petition for rulemaking from the State of Nevada (PRM-73-10) that requests NRC to strengthen the regulations governing the security of SNF shipments against malevolent acts.

B. Who Will This Action Affect?

This rule affects NRC licensees that are authorized to transport or deliver to a carrier to transport SNF. This includes, but is not limited to, nuclear power plant licensees, non-power reactor licensees, special nuclear material licensees and ISFSI licensees who transport, or deliver to a carrier for transport, in a single shipment, a quantity of irradiated reactor fuel in excess of 100 grams (0.22 lbs) in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 Sv Gray (100 ~~rem~~ rad) per hour at a distance of 1 meter (3.3 feet) from any accessible surface without intervening shielding.

Comments on the NRC's Handling of Request 3 of PRM-73-10 in the Rule:

The NRC received three comments on request 3 of PRM-73-10. The State of Nevada indicated that the NRC's proposed rule adopted an approach to routing different from their request. However, the State believes that NRC's approach will achieve the primary objective, "to minimize movement of SNF through heavily populated areas." In addition, the State of Nevada indicated that their concerns about the security of rail shipments through urban areas was addressed by regulations enacted in 2008 by the U.S. Department of Homeland Security's Transportation Security Administration (TSA) (49 CFR Parts 1520 and 1580; 73 FR 72130) and by DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA) (49 CFR Parts 172, 179, and 209; 73 FR 72182). The State of Nevada further elaborated that the new State preplanning involvement requirements in the NRC's proposed rule, combined with the requirements for State involvement under the new TSA and PHMSA rail security regulations, would allow affected States to address unique local conditions important for physical protection of shipments along rural routes.

A commenter from RAMTASC indicated that request 3 of PRM-73-10 would be problematic. The commenter indicated that the Nevada request could conflict with the railroad's responsibilities under the Rail Safety Improvement Act of 2008, which requires railroads to use objective data as the basis for selecting rail routes that provide for the best overall combination of safety and security. The RAMTASC indicated that **specific routing requirements that minimize shipments through** populated areas could ~~require~~ **lead to** shipments ~~to being~~ transported on lower quality rail tracks that would increase the accident risk. The commenter further elaborated that the trade-off between increasing security from speculative acts of terrorism by decreasing safety is not wise. The RAMTASC agreed with NRC's decision to not

(b)(3)(i), a reference to the definition of “movement control center” in § 73.2 was added; and 3) in § 73.37(b)(3)(v), the language was revised to clearly indicate that the transportation security procedures should address the roles and responsibilities of all personnel involved in the planning, monitoring and execution of the physical protection of SNF in transit. In addition, the accompanying guidance document clearly delineates the roles and responsibilities of all these personnel, especially armed escorts.

Issue 3: Metric System § 73.37(a)(1)

Comment 1: The State of Nevada supported the revisions of the section to include both the metric and English units, and clarification of the term “irradiated reactor fuel” means “SNF.”

Response to Comment 1: The comment expressed agreement with the proposed revisions. As such, no change to the rule language is required.

Comment 2: One commenter (Private Citizen – Hardin) recommended that the proposed language “...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” be changed to “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.”

Response to Comment 2: **The NRC agrees with this comment and notes that the International Atomic Energy Agency standard for physical protection on nuclear material, INFCIRC 225/rev4, specifies a “radiation level” in units of Gray/hr (rad/hr) in applying the self-protecting standard.** In order to ~~avoid confusion and to maintain consistency~~ with ~~DOT labeling guidelines for radioactive material~~ **IAEA, all references to self-protection standard will use Gray (rad) as the units.** Additionally, the phrase “0.91 meters (3 feet)” has been changed to “1 meter (3.3 feet).” ~~In addition, based on 49 CFR 173.403, “Definitions,”~~

~~this change will conform to the units used in the definition of transport index (TI), which is a very similar concept.~~

Issue 4: Removal of Distinction Between Heavily Populated and Other Areas § 73.37(a)(1)

Comment: Four comments were received on this issue, three from State organizations (State of Nevada, CHP, and the CSG Midwestern) and one from the transportation industry (RAMTASC). There was overall support from the States and industry for requiring armed escorts for the entire road and rail route. The State of Nevada supported the proposed rule revisions which removed the distinction for armed guard requirements between heavily populated areas and other areas through or across which a SNF shipment may pass. The State of Nevada agreed that these revisions would address requests 4 and 5 of PRM-73-10.

One State commenter (CHP) indicated that the removal of the distinction between heavily populated areas and other areas would provide consistency in the level of protection of the shipment for the entire route. The CSG Midwestern agreed with the decision to require the same security measures along the entire route rather than have different requirements for highly populated areas. The State commenter indicated that the change will eliminate the likelihood of potential areas of vulnerability along the shipment route for theft, diversion, or radiological sabotage. A commenter from industry (RAMTASC) indicated that an armed escort for the entire route was already incorporated in most SNF shipments plans and incorporating that change into the rule was sensible.

Response: The comments expressed agreement with the proposed revisions. As such, no change to the rule language is required.

Issue 5: Performance Objectives § 73.37(a)(2)

Comment: The State of Nevada supported all aspects of the revisions to § 73.37(a)(2),

is used for all shipments and to prohibit the avoidance of States that impose fees for transportation of radioactive materials.

Response: The NRC agrees that licensees should preplan and coordinate with State Governors or the Governor's designee in advance of any shipments and that the shortest most direct route should be used for all shipments when feasible. However, depending on the departure and arrival destinations of a shipment, highway construction along the preplanned route, detours, etc., it is not always possible for shipment routes to travel the shortest and most direct route. The preplan and coordinate requirements are sufficiently flexible to address these issues.

The NRC also agrees with the statement that the rule could be strengthened to ensure that licensees preplan and coordinate. The rule text and guidance document were changed to recommend that States be contacted for preplanning purposes no later than 2 weeks prior to a shipment or prior to the first shipment in a series of shipments.

In terms of the notification of Tribal agencies, this issue ~~is being~~ **was** addressed as a part of a separate rulemaking entitled, "Advance Notification to Native American Tribes of Transport of Certain Types of Nuclear Waste," which was ~~published as a proposed rule on December 8, 2010 (75 FR 75641)~~ **approved by the Commission on January 30, 2012.** Therefore, this portion of the comment is outside the scope of this rulemaking.

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§ 73.37 Requirements for physical protection of irradiated reactor fuel in transit.

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(i) Minimize the potential for theft, diversion, or radiological sabotage of spent nuclear fuel shipments; and

(ii) Facilitate the location and recovery of spent nuclear fuel shipments that may have come under the control of unauthorized persons.

(2) To achieve these objectives, the physical protection system shall:

(i) Provide for early detection and assessment of attempts to gain unauthorized access to, or control over, spent nuclear fuel shipments;

(ii) Delay and impede attempts at theft, diversion, or radiological sabotage of spent nuclear fuel shipments; and

(iii) Provide for notification to the appropriate response forces of any attempts at theft, diversion, or radiological sabotage of a spent nuclear fuel shipment.

³ For purposes of 10 CFR 73.37, the terms "irradiated reactor fuel" and "spent nuclear fuel" are used interchangeably.

AFFIRMATION ITEM

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER OSTENDORFF
SUBJECT: SECY-12-0009 – FINAL RULE: 10 CFR 73.37,
“PHYSICAL PROTECTION OF IRRADIATED FUEL IN
TRANSIT” (RIN 3150-A164)

Approved X Disapproved Abstain

Not Participating

COMMENTS: Below Attached X None

W. Ostendorff
SIGNATURE

4/17/12
DATE

Entered on “STARS” Yes X No

Commissioner Ostendorff's Comments on SECY 12-0009, " Final Rule: 10 CFR 73.37, Physical Protection of Irradiated Fuel in Transit"

I approve publishing 10 CFR 73.37, "Physical Protection of Irradiated Fuel in Transit," subject to the attached edits. I appreciate the staff's efforts to ensure the development of this rule was consistent with the process for addressing the cumulative effects of regulation.

In response to a petition for rulemaking requesting that the agency revise its definition of radiological sabotage to include economic consequences and social disruption, the staff explained in the statements of consideration that the current definition already considers these consequences. As such, the staff did not change the definition in the rule, but added to the definition in the guidance document that economic consequences and social disruption are considered in the definition. I agree with this approach to addressing the petition. That said, the statements of consideration and the guidance document should make it clear that neither the definition of sabotage nor the level of security required during spent fuel shipments is changing as a result of this clarification. These clarifications are needed to avoid misinterpretations of the revised definition that would inadvertently change the intent of the rule or result in unintended impacts on other parts of Part 73 that use the same definition of sabotage.

Specifically, the staff should make the attached revision to the statements of consideration to make it clear that the definition of sabotage is not being revised. Further, the statements of consideration should clarify that the purpose of the clarification is to convey that if the current definition of sabotage and the requirements for spent fuel transportation security are followed, economic consequences and the social disruption that might result from sabotage are likely to be minimized.

Similar clarifications should be added to the guidance document.

I also approve rescinding the Orders for spent nuclear fuel transit on the effective date of the rule. I certify that this rule will not have a significant impact on a substantial number of small entities.

for providing the first line of government response to accidents and incidents within their jurisdiction.

II. Discussion

A. What Action is the NRC Taking in this Rule?

The NRC is amending its security regulations for the transport of irradiated reactor fuel. This rulemaking establishes generically applicable security requirements and performance standards and objectives for the protection of SNF shipments from theft, diversion, or radiological sabotage. These new security requirements are similar to those requirements currently imposed by NRC Order EA-02-109. Additionally, this rulemaking addresses, in part, a 1999 petition for rulemaking from the State of Nevada (PRM-73-10) that requests NRC to strengthen the regulations governing the security of SNF shipments against malevolent acts.

B. Who Will This Action Affect?

This rule affects NRC licensees that are authorized to transport or deliver to a carrier to transport SNF. This includes, but is not limited to, nuclear power plant licensees, non-power reactor licensees, special nuclear material licensees and ISFSI licensees who transport, or deliver to a carrier for transport, in a single shipment, a quantity of irradiated reactor fuel in excess of 100 grams (0.22 lbs) in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 1 ~~Sv~~ Gray (100 ~~rem~~ msrad) per hour at a distance of 1 meter (3.3 feet) from any accessible surface without intervening shielding.

any change in the rule language.

Request 2 of PRM-73-10: Clarify the definition of the term "radiological sabotage" in § 73.2, "Definitions," and amend it to expressly include "deliberate actions which cause, or are intended to cause economic damage or social disruption regardless of the extent to which public health and safety are actually endangered by exposure to radiation." In the proposed rule, the NRC determined that the existing definition already encompasses actions of the type described by the petitioner does not need to be revised. However, the NRC agrees that clarification may be useful. The NRC proposed addressing this petition request by clarifying the definition of radiological sabotage in NUREG-0561, which is the associated regulatory guidance. -

Comments on the NRC's Handling of Request 2 of PRM-73-10 in the Rule:

Two comments were received relative to request 2 of PRM-73-10. Nevada indicated that NRC's clarification of the definition of radiological sabotage in NUREG/CR-0561 addressed its concerns. A commenter from the transportation industry (Radioactive Material Transportation and Storage Consulting (RAMTASC)) indicated that the State of Nevada's request to redefine radiological sabotage to include acts intended to cause economic or social disruption would be problematic. RAMTASC indicated that the determination of economic or social disruption is very subjective. The commenter also indicated that the State of Nevada's "subject matter experts" placed extraordinarily high estimates on economic impacts that have not received peer reviewed. RAMTASC also indicated that the Nevada analysis was not supported by the analyses generated through Environmental Impact Statements prepared by DOE for the Yucca Mountain Program, or by studies performed by DOE's National Laboratories. The commenter concluded by indicating satisfaction with NRC's handling of Request 2 of PRM-73-10.

Comments on the NRC's Handling of Request 3 of PRM-73-10 in the Rule:

The NRC received three comments on request 3 of PRM-73-10. The State of Nevada indicated that the NRC's proposed rule adopted an approach to routing different from their request. However, the State believes that NRC's approach will achieve the primary objective, "to minimize movement of SNF through heavily populated areas." In addition, the State of Nevada indicated that their concerns about the security of rail shipments through urban areas was addressed by regulations enacted in 2008 by the U.S. Department of Homeland Security's Transportation Security Administration (TSA) (49 CFR Parts 1520 and 1580; 73 FR 72130) and by DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA) (49 CFR Parts 172, 179, and 209; 73 FR 72182). The State of Nevada further elaborated that the new State preplanning involvement requirements in the NRC's proposed rule, combined with the requirements for State involvement under the new TSA and PHMSA rail security regulations, would allow affected States to address unique local conditions important for physical protection of shipments along rural routes.

A commenter from RAMTASC indicated that request 3 of PRM-73-10 would be problematic. The commenter indicated that the Nevada request could conflict with the railroad's responsibilities under the Rail Safety Improvement Act of 2008, which requires railroads to use objective data as the basis for selecting rail routes that provide for the best overall combination of safety and security. The RAMTASC indicated that specific routing requirements that minimize shipments through populated areas could require lead to shipments to being transported on lower quality rail tracks that would increase the accident risk. The commenter further elaborated that the trade-off between increasing security from speculative acts of

escorts and support them as required.

Response: The NRC agrees with this comment and has added clarifying language to the rule to address these comments. The following clarifying changes were made: 1) in § 73.37 (a)(1)(i), a reference to the definition of “armed escort” in § 73.2 was added; 2) in § 73.37 (b)(3)(i), a reference to the definition of “movement control center” in § 73.2 was added; and 3) in § 73.37(b)(3)(v), the language was revised to clearly indicate that the transportation security procedures should address the roles and responsibilities of all personnel involved in the planning, monitoring and execution of the physical protection of SNF in transit. In addition, the accompanying guidance document clearly delineates the roles and responsibilities of all these personnel, especially armed escorts.

Issue 3: Metric System § 73.37(a)(1)

Comment 1: The State of Nevada supported the revisions of the section to include both the metric and English units, and clarification of the term “irradiated reactor fuel” means “SNF.”

Response to Comment 1: The comment expressed agreement with the proposed revisions. As such, no change to the rule language is required.

Comment 2: One commenter (Private Citizen – Hardin) recommended that the proposed language “...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” be changed to “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.”

Response to Comment 2: The NRC agrees with this comment and notes that the International Atomic Energy Agency (IAEA) standard for physical protection of nuclear material, INFCIRC 225/rev.4, specifies a “radiation level” in units of Gray/hr (rad/hr) in applying the self-protecting

standard. ~~In order to avoid confusion and to maintain consistency with DOT labeling guidelines for radioactive material~~ the IAEA, all references to the self-protecting standard will use Gray (rad) as the units. Additionally, the phrase "0.91 meters (3 feet)" has been changed to "1 meter (3.3 feet)." ~~In addition, based on 49 CFR 173.403, "Definitions," this change will conform to the units used in the definition of transport index (TI), which is a very similar concept.~~

Issue 4: Removal of Distinction Between Heavily Populated and Other Areas § 73.37(a)(1)

Comment: Four comments were received on this issue, three from State organizations (State of Nevada, CHP, and the CSG Midwestern) and one from the transportation industry (RAMTASC). There was overall support from the States and industry for requiring armed escorts for the entire road and rail route. The State of Nevada supported the proposed rule revisions, which removed the distinction for armed guard requirements between heavily populated areas and other areas through or across which a SNF shipment may pass. The State of Nevada agreed that these revisions would address requests 4 and 5 of PRM-73-10.

One State commenter (CHP) indicated that the removal of the distinction between heavily populated areas and other areas would provide consistency in the level of protection of the shipment for the entire route. The CSG Midwestern agreed with the decision to require the same security measures along the entire route rather than have different requirements for highly populated areas. The State commenter indicated that the change will eliminate the likelihood of potential areas of vulnerability along the shipment route for theft, diversion, or radiological sabotage. A commenter from industry (RAMTASC) indicated that an armed escort for the entire route was already incorporated in most SNF shipments plans and incorporating that change into the rule was sensible.

Response: The comments expressed agreement with the proposed revisions. As such,

is used for all shipments and to prohibit the avoidance of States that impose fees for transportation of radioactive materials.

Response: The NRC agrees that licensees should preplan and coordinate with State Governors or the Governor's designee in advance of any shipments and that the shortest most direct route should be used for all shipments when feasible. However, depending on the departure and arrival destinations of a shipment, highway construction along the preplanned route, detours, etc., it is not always possible for shipment routes to travel the shortest and most direct route. The preplan and coordinate requirements are sufficiently flexible to address these issues.

The NRC also agrees with the statement that the rule could be strengthened to ensure that licensees preplan and coordinate. The rule text and guidance document were changed to recommend that States be contacted for preplanning purposes no later than 2 weeks prior to a shipment or prior to the first shipment in a series of shipments.

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