

RULEMAKING ISSUE AFFIRMATION

January 19, 2012

SECY-12-0009

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

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

PURPOSE:

To request Commission approval to publish a final rule in the *Federal Register* that would amend the security requirements for irradiated fuel¹ in transit in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73.

SUMMARY:

The staff is recommending that the Commission approve the final rule to amend the security requirements for spent nuclear fuel (SNF) in transit. This rulemaking establishes generically applicable security requirements similar to the requirements currently imposed by NRC Order EA-02-109, "Issuance of Order for Interim Safeguards and Security Compensatory Measures for the Transportation of Spent Nuclear Fuel Greater than 100 Grams," (67 FR 63167; October 10, 2002). This rulemaking also establishes acceptable performance standards and objectives for the protection of SNF shipments from theft, diversion, or radiological sabotage. 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. If approved, this rulemaking will apply to each NRC licensee who transports, or delivers to a carrier to transport SNF.

BACKGROUND:

On September 11, 2001, terrorists simultaneously attacked targets in New York, NY, and Washington, DC, utilizing large commercial aircrafts as weapons. The terrorist attacks

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¹ The terms "irradiated reactor fuel" and "spent nuclear fuel" are used interchangeably in this rule.

heightened concerns about the use of risk-significant radioactive materials in a malevolent act. After the terrorist attacks, the U.S. Nuclear Regulatory Commission (NRC or the Commission) issued a series of security-related orders to specific licensees. The Commission imposed additional security requirements on the shipment of SNF through EA-02-109, "Issuance of Order for Interim Safeguards and Security Compensatory Measures for the Transportation of Spent Nuclear Fuel Greater than 100 Grams," (67 FR 63167; October 10, 2002). This Order was issued to NRC power reactor licensees, non-power reactor licensees, independent spent fuel storage installation (ISFSI) licensees, and special nuclear material licensees, who shipped, received, or planned to ship or receive SNF under the provisions of 10 CFR Part 71. Subsequently, the Commission issued similar orders to licensees shipping SNF during the period October 2003 through December 8, 2010. These orders are collectively referred to as the "Orders for SNF in Transit" or "the Orders." The staff has determined that including these security requirements in the regulations will enhance regulatory efficiency and effectiveness.

The Commission approved publication of the proposed rule in a Staff Requirements Memorandum (SRM) for SECY-09-0162, Proposed Rule: 10 CFR 73.37 Physical Protection of Spent Nuclear Fuel in Transit (July 21, 2010) (ADMAS Accession No. ML102020583). On October 13, 2010, the NRC published the proposed rule for a 90-day public comment period, which was to end on January 11, 2011 (75 FR 62695). The staff received several requests to extend the comment period. In response to these requests, on January 10, 2011 (76 FR 1376), the NRC extended the comment period to April 11, 2011.

DISCUSSION:

The rule would establish the performance standards and objectives for the protection of SNF shipments from theft, diversion, or radiological sabotage. In developing the final rule, the staff considered the previously issued Orders for SNF in Transit, lessons learned from implementation of the orders, and public comments received in response to the proposed rule and the NRC's resolution of issues raised in PRM-73-10.

The NRC received 17 comment letters on the proposed rule. The commenters included licensees, State organizations, industry organizations, individuals, and a Federal agency. The major issues associated with the rulemaking are discussed below. The comments and associated responses are discussed in Section III of the *Federal Register* notice (Enclosure 1).

State of Nevada Petition PRM-73-10:

The State of Nevada petition contained eight requests related to the security of SNF in transit. Two of these requests – clarification of the meaning of the term "hand-carried equipment" and a comprehensive assessment of the consequences of terrorist attacks that have the capability for radiological sabotage – were denied in the "State of Nevada: Denial of Portions of Petition for Rulemaking, Consideration of the Remaining Portions in the Rulemaking Process" (74 FR 64012; December 7, 2009).

The remaining items in the State of Nevada's petition were considered in this rulemaking. This rulemaking did not adopt a third petition request, the use of dedicated trains for the shipment of SNF in transit. The remaining five petition requests have been addressed either by provisions in the rule language or the associated regulatory guidance document.

The public was invited to comment on how the NRC addressed the remaining items in PRM-73-10. The comments received supported the NRC's handling of the petition. In particular, the State of Nevada supported how the NRC addressed its petition in the proposed rule. The State of Nevada further indicated that the three requests which were denied (changes to the design basis threat, a comprehensive assessment of attack consequences, and the mandatory use of dedicated trains) have been largely satisfied by other developments subsequent to the events of September 11, 2001. Additional information regarding the disposition of PRM-73-10 is provided in Section II. G of the *Federal Register* notice.

Proposed Rulemaking Revisions to Security Requirements:

The proposed revisions to the security requirements for the shipment of SNF in transit would provide additional security enhancements in the following areas: preplanning and coordination with States, communications, procedures and training, armed escorts, deadly force training, and background investigations. The major features of these security provisions are discussed below.

Preplanning and Coordination:

Current regulations require limited coordination with the States when shipping SNF. If approved, the final rule would require licensees to preplan and coordinate SNF shipment information with the Governors or Governor's designees of the States in which the shipment would cross in order to: 1) ensure minimal shipment delays; 2) arrange for State law enforcement escorts; 3) coordinate movement control information, as needed; 4) coordinate safe haven locations; and 5) coordinate the shipping route.

The Commission directed the staff to solicit input from the States on the rule language regarding preplanning and coordination for SNF in transit. The staff participated in eight public meetings and two Webinars relative to this rulemaking. The comments indicated strong support from the States and industry on the inclusion of the preplanning and coordination section in the rule. One commenter from a State organization (Illinois Emergency Management Agency) thanked the NRC for its recognition of the States in the transportation of SNF. The commenter applauded the NRC for its efforts to bring shipment planning to the forefront and for recognizing that early coordination with States on issues like routing, identification of safe havens and other important aspects of shipping is paramount to the safety of SNF shipments. The State of Nevada also specifically endorsed the requirements for licensees to preplan and coordinate SNF shipments with States. One commenter from the nuclear industry (Nuclear Energy Institute (NEI)) indicated that the proposed rule's reliance on preplanning and coordination between entities involved in shipments provides desirable flexibility within which reactor licensees, common carriers, and Federal, State and local authorities can work together to develop effective plans and protocols to assure the security of SNF in transit.

Communications:

Current regulations require that movement control personnel use specific communication devices, i.e., citizens band (CB) radio or radiotelephone, to meet NRC requirements. In view of the continued advancements in technology, these methods of communication could become obsolete in the near future. If approved, the final rule would require movement control

personnel have appropriate communications capabilities as opposed to requiring the use of specific communication devices. This flexibility will allow the utilization of the best available technology to meet the performance requirements in the regulations.

One commenter from NEI indicated that elimination of a mandatory CB radio requirement is an improvement given the present vastly improved state of communication capabilities in the U.S. The commenter agreed with the use of general performance requirements in lieu of prescribing the use of specific equipment which may be obsolete in the near future, and that this is an example of the type of flexibility that should be broadly preserved in this rule. In addition, a commenter from a State organization (Western Interstate Energy Board) indicated that the NRC was correct in noting the rapid obsolescence in the field of telemetric monitoring and tracking, and the need for performance criteria rather than specific systems specification. Based on the comments received on the communications requirements, the rule and the associated regulatory guidance were not revised.

Procedures and Training:

If approved, the final rule would require licensees to develop normal condition and contingency and response procedures for the shipment of SNF. These procedures are to cover notifications, communication protocols, loss of communication, and responses to actual, attempted, or suspicious activities. The revisions would also require drivers, accompanying personnel, railroad personnel, and other movement control personnel to be adequately trained in normal condition and contingency and response procedures.

The State of Nevada fully supported the proposed provisions on contingency and response procedures in § 73.37. The NEI indicated that the procedures should clearly indicate the roles and responsibilities of all the individuals involved in the shipment. Based on the comments received, the rule and the associated regulatory guidance were revised to clarify the roles and responsibilities of individuals involved in the shipment.

Armed Escorts:

Current regulations require that licensees use armed escorts in heavily populated areas but not in other areas along the route. If approved, the final rule would require licensees to provide armed escorts along the entire shipment route. The rule would ensure that the same security requirements for SNF in transit are applied along the entire route for road and rail shipments, and in any U.S. port where vessels carrying SNF shipments are scheduled to stop.

There was overall support from the States and industry for requiring armed escorts for the entire road and rail route. A commenter from the transportation industry (Radioactive Material Transportation and Storage Consulting) indicated that this requirement is already part of most shipment plans, and incorporating this change into the regulations makes sense. Another State organization (Council of State Governments Midwestern) indicated that the new requirement would eliminate the likelihood of "potential areas of vulnerability along the shipment route for theft, diversion, or radiological sabotage." Based on the comments received, the rule and the associated regulatory guidance were not revised.

Deadly Force Training for Private Armed Escorts

The final rule, if approved, will require private armed escorts to be trained on the Federal and State laws on the use of deadly force for each State the shipment of SNF will pass through. The final rule indicates that deadly force training does not apply to members of local law enforcement agencies (LLEAs) performing escort duties for SNF shipments.

Commenters' views varied on the inclusion of deadly force training in the rule. The NEI indicated that a Federal law on deadly force needs to be developed since State laws vary. The commenter also indicated that it is unreasonable to train armed escorts on deadly force laws for each jurisdiction through which a shipment passes since these requirements vary.

Other commenters supported the inclusion of the deadly force training requirement in the rule. One commenter suggested that the NRC compile a digest of State laws concerning the use of deadly force, and require armed escorts to pass a written test based on that information. Two commenters from State organizations supported the deadly force training requirement for private armed escorts. One commenter from a State organization (CSG Midwestern) suggested that the deadly force training requirement be expanded to require licensees to ensure that armed guards are knowledgeable of the Federal and State deadly force laws. A commenter from the California Highway Patrol (CHP) indicated that the proposed deadly force training requirements for private armed escorts are consistent with the deadly force requirements for other private armed guards (i.e. security guards) in State jurisdictions.

Because armed escorts need to act effectively and preplanning activities will ensure that licensees have sufficient time to identify when private armed escorts need deadly force training, the rule and the associated regulatory guidance were not revised.

Background Investigations:

The final rule, if approved, will create a new § 73.38 requiring that licensees shipping SNF develop a background investigation and access authorization program. The main objectives of the provisions are to ensure that individuals granted unescorted access to SNF in transit or access to Safeguards Information relative to SNF in transit are trustworthy and reliable and do not constitute an unreasonable risk to the public health and safety or common defense and security. The key components of the access authorization program include the use of a reviewing official, informed consent, personal history disclosure, background investigations, use of procedures, the right to correct and complete information before an adverse determination, and an annual program review. A limited reinvestigation would be required every 10 years. These provisions are similar to and generally consistent with the existing access authorization requirements in Part 73.

Commenters generally supported the inclusion of the background investigation requirements. The State of Nevada endorsed the background investigation requirements. The U.S. Department of Energy Naval Reactors Program (DOE NRP) also considered the background investigation requirements appropriate for private armed escorts, and indicated that escorts for naval reactors shipments currently meet all of the § 73.38 new requirements.

A number of commenters sought clarification as to whether requirements for background investigations would apply to Federal and State railroad inspectors, or individuals who have current Federal background investigations. The DOE NRP indicated that the proposed background checks could lead to significant operational and cost impacts to commercial carriers handling shipments. The commenter indicated that carriers are already subject to background investigations in accordance with the U.S. Department of Transportation regulations. The commenter indicated that the proposed NRC requirements should be reexamined. A commenter from a State organization (Missouri Department of Natural Resources) and NEI both indicated that the proposed rule should clarify whether requirements for background investigations apply to Federal and State railroad inspectors, as they may need to be in proximity to the shipment in order to conduct an inspection.

Based on the comments received, the proposed rule was revised to add clarifying language on applicability of background investigation to Federal and State personnel, and other individuals relieved of background investigations in accordance with §§ 73.59 and 73.63.

Rule Consistency with Strategic Goals and Objectives:

The final rule is consistent with NRC's strategic goals and performance objectives. It supports the NRC's strategic goals of ensuring the protection of public health and safety and the environment, and of ensuring the secure use and management of radioactive materials. The rule would eliminate the need to issue and re-issue security Orders for SNF in Transit to licensees. As such, it would support the NRC's organizational excellence objectives of ensuring that its actions are efficient, effective, realistic, and timely. This rulemaking was conducted in an open process that allowed the public to comment on the proposed rule and associated draft guidance in support of the NRC's openness strategy.

IMPLEMENTATION ISSUES:

The development of the final rule included actions consistent with the process for addressing cumulative effects of regulation. These actions included the following:

- 1) The staff interacted with external stakeholders during the development of the regulatory basis and draft guidance.
- 2) During the rulemaking process, staff considered the 2008 request from the Western Governors' Association which stressed the importance of uniformity of transportation security requirements for radioactive materials in quantities of concern (RAMQC), SNF and high level waste. To the extent possible, the staff sought to establish consistency between the final rule and the physical protection in transit requirements for RAMQC in the proposed 10 CFR Part 37, "Physical Protection of Byproduct Materials."
- 3) The staff published the proposed rule and draft guidance less than 1 month apart. This ensured that stakeholders were able to review both documents concurrently.
- 4) The final rule and guidance document incorporated all of the requirements in the Orders for SNF in Transit.

5) Based on stakeholder requests, the comment periods for the proposed rule and draft guidance were extended from 90-days to 180-days.

In addition, during the public comment period on the proposed rule, an NRC licensee recommended that the implementation date for the final rule be changed from 30 days to 90 days from the date of publication. The staff incorporated this recommendation into the final rule. As a result of these actions, the staff expects that these efforts will minimize any cumulative effects of regulation resulting from this final rule.

As mentioned above, the staff recognized that NRC licensees were required to implement a number of security requirements in recent years. Two examples are: 1) the "Protection of Safeguards Information (SGI)" amendments (73 FR 63596; October 24, 2009), which were effective on February 23, 2009; and 2) the "Power Reactor Security Requirements" amendments (74 FR 13926; March 27, 2009), which were effective on May 26, 2009, and had a compliance date of March 31, 2010, for operating Part 50 licensees. As such, the staff in the development of the final rule sought to establish as much consistency as possible with existing NRC security requirements. For example, the final rule references existing provisions in §§ 73.21, 73.22, 73.59, and 73.61, and incorporates provisions similar to those in § 73.56 for background investigations.

The Rescission Plan for the Orders is provided as Enclosure 2. The plan provides for the rescission of the Orders issued to NRC licensees on the effective date of the final rule, which is proposed as 90 days after publication. A crosswalk² between the rule and the Orders' requirements is included as an attachment to the Rescission Plan. The staff used the crosswalk as a basis for determining that all of the requirements in the Orders have been fully incorporated into the final rule. During the 90-day period between the rule publication and the effective date, the staff plans to issue a *Federal Register* notice that discusses the rescission of the Orders for SNF in Transit. The staff also plans to issue letters to all affected categories of licensees. In addition, the letters to licensees and the rescission *Federal Register* notice would be made available via the NRC's public Web site and would be publicly available in Agencywide Documents Access and Management System (ADAMS).

In addition, the final rule for the physical protection of SNF in transit, if approved, would significantly revise § 73.37, including paragraph (f). The final rule "Advance Notification to Native American Tribes of Transportation of Certain Types of Nuclear Waste" will revise § 73.37(f), as well. The Tribal notification rule was provided to the Commission on October 7, 2011, in SECY-11-0142. After the Commission approves the Tribal notification rule, the § 73.37(f) revisions will be incorporated into the final rule for the physical protection of SNF in transit.

² The Office of Nuclear Security and Incident Response, in coordination with the Office of the General Counsel, developed a comparison between the security Orders for SNF in Transit and the final rule provisions for the Physical Protection of Irradiated Fuel in Transit. The purpose of the crosswalk is to ensure that the requirements in the Orders were captured in the final rule, thus allowing the Orders to be rescinded, upon approval by the Commission.

AGREEMENT STATE ISSUES:

Under the "Policy Statement on Adequacy and Compatibility of Agreement States Programs," approved by the Commission on June 20, 1997, and published in the *Federal Register* (62 FR 46517; September 3, 1997), this rule is classified as compatibility Category "NRC." Agreement State Compatibility is not required for Category "NRC" regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the Atomic Energy Act of 1954, as amended, or the provisions of Title 10 of the *Code of Federal Regulations*. These program elements should not be adopted by the Agreement States.

COMMITMENTS:

In conjunction with this final rule, staff revised NUREG-0561, "Physical Protection of Shipments of Irradiated Reactor Fuel." The revised document will be published in the *Federal Register* shortly after the publication of the final rule.

RECOMMENDATIONS:

That the Commission:

1. Approve for publication in the *Federal Register* the notice of the final rule.
2. Certify that this rule, if promulgated, will not have significant impact on a substantial number of small entities to satisfy the requirement of the Regulatory Flexibility Act, 5 U.S.C. 605(b). This certification is included in the enclosed *Federal Register* notice.
3. Approve rescinding the Orders for SNF in Transit on the effective date of the final rule in accordance with the Rescission Plan for Orders.
4. Note:
 - a. That the Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reasons for it, as required by the Regulatory Flexibility Act, 5 U.S.C. 605(b);
 - b. A final Regulatory Analysis has been prepared for this rule (Enclosure 3);
 - c. An Environmental Assessment has been prepared for this rule (Enclosure 4);
 - d. The staff has determined that this action is not a "major rule" as defined in the Congressional Review Act of 1996 [5 U.S.C. 804(2)] and will confirm this determination with the Office of Management and Budget (OMB). The appropriate Congressional and Government Accountability Office contacts will be informed;
 - e. The appropriate Congressional committees will be informed;

- f. A press release will be issued by the Office of Public Affairs when the final rule is filed with the Office of the Federal Register; and
- g. The final rule contains amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.) that must be submitted to the OMB for its review and approval before publication of the final rule in the *Federal Register*.

RESOURCES:

The staff estimates that 1.4 full-time equivalents (FTE) will be required to complete this final rule. These resources have been allocated in the FY 2012 budget as follows: 0.8 FTE for the Office of Federal and State Materials and Environmental Management Programs; 0.1 FTE for the Office of the General Counsel; 0.1 FTE for the Office of Administration; 0.1 FTE for the Office of Nuclear Material Safety and Safeguards; 0.1 FTE for the Office of Nuclear Security and Incident Response; 0.1 FTE for the Office of Nuclear Reactor Regulation; and 0.1 FTE for the Office of Information Services. These resources are within existing budget allocations.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. The Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications and has no objections.

/RA by Michael F. Weber for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. *Federal Register* Notice
2. Rescission Plan for Orders
3. Regulatory Analysis
4. Environmental Assessment

- f. A press release will be issued by the Office of Public Affairs when the final rule is filed with the Office of the Federal Register; and
- g. The final rule contains amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.) that must be submitted to the OMB for its review and approval before publication of the final rule in the *Federal Register*.

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