

RULEMAKING ISSUES (Notation Vote)

October 31, 2009

SECY-09-0162

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

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

PURPOSE:

To request Commission approval to publish a proposed rule, in the *Federal Register*, that would amend Title 10 of the Code of Federal Regulations (CFR) Part 73 security requirements for spent nuclear fuel in transit (for purposes of this rulemaking, the terms "irradiated reactor fuel" and "spent nuclear fuel" are used interchangeably).

SUMMARY:

The U.S. Nuclear Regulatory Commission (NRC) staff is recommending that the Commission approve a proposed rule that would amend its security regulations pertaining to the transport of spent nuclear fuel. This proposed rulemaking would establish generically applicable security requirements similar to those previously imposed by Commission orders issued after the terrorist attacks of September 11, 2001. The proposed rulemaking would establish the acceptable performance standards and objectives for the protection of spent nuclear fuel shipments from theft, diversion, or radiological sabotage. The proposed amendments would apply to those licensees authorized to possess or transport spent nuclear fuel. The staff recognizes that the proposed rule may place additional requirements on licensees, and will be sensitive to factoring implementation timing into considerations for any final rule. The proposed security requirements would also address, in part, a petition for rulemaking (PRM-73-10) from the State of Nevada that requests that the NRC strengthen the regulations governing the security of spent nuclear fuel shipments against malevolent acts.

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BACKGROUND:

On June 15, 1979, the NRC published in the *Federal Register* (44 FR 34466) an interim final rule that established its first requirements for the physical protection of spent nuclear fuel in transit. The interim final rule added 10 CFR 73.37, "Requirements for Physical Protection of Irradiated Reactor Fuel in Transit." After considering public comments, a final rule was published on June 3, 1980 (45 FR 37399).

The current 10 CFR 73.37 has changed little since its promulgation in 1980. These regulations require licensees to put in place a physical protection system for spent nuclear fuel shipments that meets the following objectives: (1) minimize the possibilities for radiological sabotage of spent nuclear fuel shipments, especially within heavily populated areas, and (2) facilitate the location and recovery of spent nuclear fuel shipments that may have come under the control of unauthorized persons. The regulation also provides for: (1) the early detection and assessment of attempts to gain unauthorized access to or control over spent nuclear fuel shipments, (2) the notification to the appropriate response forces of any sabotage events, and (3) the impeding of attempts at radiological sabotage of spent nuclear fuel shipments in heavily populated areas or attempts to illicitly move such shipments into heavily populated areas.

After the terrorist attacks of September 11, 2001, the Commission determined that the threat environment required that additional security requirements for spent nuclear fuel shipments be implemented on an expedited basis. In a Staff Requirements Memorandum (SRM) dated May 2, 2002, the Commission directed the staff to develop orders that imposed additional security requirements on spent nuclear fuel shipments for transportation by highway and rail. The documents relative to this issue are:

- COMSECY-02-0026, "Interim Compensatory Measures, Orders and Communications Plan for Transportation of Spent Nuclear Fuel and Large Quantity Shipments of Radioactive Materials," dated May 31, 2002, ADAMS Package Number ML021360656 and ADAMS Accession Number ML021360658; and
- COMSECY-02-0044, "Final Interim Compensatory Measures for the Transportation of Spent Nuclear Fuel," dated August 15, 2002, ADAMS Package Number ML022200710 and ADAMS Accession Number ML022210080.

The EA-02-109 Order, "Issuance of Order for Interim Safeguards and Security Compensatory Measures for the Transportation of Spent Nuclear Fuel Greater than 100 Grams" was issued on October 3, 2002. The order was issued to licensees who had shipped or received spent nuclear fuel within 3 years and who planned to ship or receive spent nuclear fuel in the foreseeable future. The orders were issued as immediately effective under NRC's authority to protect the common defense and security under the Atomic Energy Act of 1954 (AEA), as amended.

The staff is proposing to amend its security regulations pertaining to the transport of spent nuclear fuel. This proposed rulemaking would establish generically applicable security requirements similar to those previously imposed by Commission orders issued after the terrorist attacks of September 11, 2001. The proposed rulemaking would establish the acceptable performance standards and objectives for the protection of spent nuclear fuel shipments from theft, diversion, or radiological sabotage. The proposed security regulation would also address, in part, a State of Nevada petition for rulemaking (PRM-73-10) that requested that the NRC

initiate rulemaking to strengthen the regulations governing the security of spent nuclear fuel shipments against malevolent acts.

DISCUSSION:

The proposed rulemaking would establish generically applicable security requirements similar to those previously imposed by orders issued after the terrorist attacks of September 11, 2001. The proposed rulemaking would also add several new requirements not derived directly from the security order requirements, but developed as a result of insights gained by performing security assessments of potential security vulnerabilities associated with spent nuclear fuel in transit. Also, the proposed rulemaking would address, in part, the requests for NRC rulemaking raised by PRM-73-10.

Enhanced Security Orders:

The specifics of the EA-02-109 Order are protected as Safeguards Information. Their details cannot be discussed in this paper. In general, the additional security requirements resulted in enhancements in the following areas: preplanning and coordination with States and local law enforcement agencies; improved communications among movement control personnel; the development of normal and contingency procedures; and more thorough background investigations of individuals associated with the spent nuclear fuel shipment. The proposed rule would address all of these areas.

Nevada Petition:

By a letter dated June 22, 1999, the State of Nevada submitted a rulemaking petition requesting that the NRC initiate rulemaking to strengthen its regulations for the physical protection of spent nuclear fuel shipments against radiological sabotage and terrorist acts. The NRC docketed the petition on July 13, 1999, as Docket No. PRM-73-10. The NRC published a notice of receipt of the petition, which requested public comment, on September 13, 1999 (64 FR 49410). The PRM-73-10 is available at ADAMS Accession Number ML092540603. The Commission review of this petition was tabled following the terrorist attacks of September 11, 2001. This proposed rulemaking would consider and address, in part, PRM-73-10.

In PRM-73-10, Nevada requested that the NRC: (1) clarify the meaning of the term "hand-carried equipment" in 10 CFR 73.1(a)(1)(i)(D); (2) clarify the definition of the term "radiological sabotage" in 10 CFR 73.2 to include actions against spent nuclear fuel shipments which 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 10 CFR 73.37(b)(7) to require shippers and carriers of spent nuclear fuel 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 10 CFR 73.37(c); (5) require armed escorts along the entire rail shipment route by eliminating the differential based on population in 10 CFR 73.37(d); (6) amend 10 CFR 73.37(b) by adopting additional planning and scheduling requirements for spent nuclear fuel shipments that are the same as those for formula quantities of special nuclear material found in 10 CFR 73.26(b); (7) amend 10 CFR 73.37(d) to require that rail shipments of spent nuclear fuel be made in dedicated trains; and (8) conduct a comprehensive assessment of

the consequences of terrorist attacks that have the capability of radiological sabotage. In this proposed rulemaking, the NRC will consider the above items raised in PRM-73-10, except for the first and eighth items, namely, clarification of the meaning of the term “hand-carried equipment” and the conducting of a comprehensive assessment of the consequences of terrorist attacks that have the capability of radiological sabotage. The first and eighth items of PRM-73-10 will be addressed in a separate NRC notice. The remaining items are addressed as a part of this proposed rulemaking and the public is invited to comment on how the proposed rulemaking address these issues.

Background Investigations for Unescorted Access to Spent Nuclear Fuel Shipments §73.38

The staff is proposing to add a new section to address background investigations for individuals granted unescorted access to spent nuclear fuel shipments. The proposed requirements are in accordance with section 652 of the Energy Policy Act of 2005 (EPAct). Section 652 of the EPAct amended Section 149 of the AEA to require fingerprinting - a Federal Bureau of Investigation identification and criminal history records check for any individual who is permitted unescorted access to NRC regulated materials or properties that the Commission determines to be of such significance to public health and safety or the common defense and security as to warrant fingerprinting and background checks. Section 149 of the AEA also requires that “all fingerprints obtained by a licensee or applicant...shall be submitted to the Attorney General of the United States through the Commission for identification and a criminal history records check.”

The main objective of the background investigation requirements is to ensure that individuals granted unescorted access to NRC regulated materials or properties are trustworthy and reliable and do not constitute an unreasonable risk to the public health and safety or common defense and security. By the proposed requirements, the staff is recommending to the Commission that individuals granted unescorted access to spent nuclear fuel shipments be made subject to the Section 149 background investigation requirements. The proposed provisions are similar to those in paragraph (d), *Background Investigations*, of §73.56, *Personnel access authorization requirements for nuclear power plants*.

Strategic Goals and Objectives

The proposed revisions are consistent with NRC strategic goals and performance goals. They support 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 proposed revisions will eliminate the need to issue and re-issue security orders for spent nuclear fuel shipments to licensees. As such, the proposed revisions will support the NRC’s organizational excellence objectives of ensuring that its actions are efficient, effective, realistic, and timely. In support of NRC’s openness strategy, the staff is proposing a 75-day public comment period.

LICENSEE IMPLEMENTATION ISSUES:

The staff recognizes that NRC licensees have been required to implement a number of security requirements in the past year, and will be required to implement additional requirements in the near future. 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 compliance is required by March 31, 2010 for current operating Part 50 licensees. The proposed spent nuclear fuel in transit rule may also place additional security requirements on NRC licensees. The staff will be sensitive to the implementation timing of the additional requirements in the proposed rule to factor the impact on licensees into the final rule if the proposed requirement is approved by the Commission.

AGREEMENT STATE ISSUES:

The regulation of spent nuclear fuel transit is an activity reserved to the Commission under the AEA, as amended. This rulemaking will not have any impact on Agreement States' regulations. Therefore, Agreement States will not need to make conforming changes to their regulations.

COMMITMENTS:

In conjunction with this proposed rulemaking, staff is revising NUREG-0561, "Requirements for Physical Protection of Irradiated Reactor Fuel in Transit," which was published in June 1980. This document provides general guidance to licensees concerning the physical protection of spent nuclear fuel shipments. The staff plans to publish NUREG-0561 for public comment during the public comment period on this proposed rule.

RECOMMENDATIONS:

That the Commission:

1. Approve for publication, in the *Federal Register*, the proposed amendments to Part 73
2. Note:
 - a. That the proposed amendments will be published in the *Federal Register*, allowing a 75-day public comment period.
 - b. 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).
 - c. That a draft Regulatory Analysis has been prepared for this rulemaking (Enclosure 2).
 - d. That a draft Environmental Assessment has been prepared for this rulemaking (Enclosure 3).
 - e. That appropriate Congressional committees will be informed of this action.
 - f. That a press release will be issued by the Office of Public Affairs when the proposed rulemaking is filed with the Office of the Federal Register.

- g. Office of Management and Budget (OMB) review is required and a clearance package will be forwarded to OMB on or immediately after the date the proposed rule is published in the *Federal Register*.

RESOURCES:

Resources for FY 2010 were approved for 1.6 FTE. Resources for FY 2011 have been requested for .5 FTE.

COORDINATION:

The Office of the General Counsel has no legal objection to the proposed rulemaking. The Office of the Chief Financial Officer has reviewed this Commission paper for resource implications and has no objections. The rule suggests changes in information collection requirements that must be submitted to OMB on or immediately after the date the proposed rule is published in the *Federal Register*.

/RA Bruce S. Mallett for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. *Federal Register* Notice
2. Draft Regulatory Analysis
3. Draft Environmental Assessment

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Original signed by Bruce S. Mallett for

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