

**ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT FOR THE  
FINAL RULE AMENDING 10 CFR 73.37 AND 73.72, AND ADDING NEW 10 CFR 73.38  
PHYSICAL PROTECTION OF IRRADIATED REACTOR FUEL IN TRANSIT**

**Office of Federal and State Materials and Environmental Management Programs**

**U.S. Nuclear Regulatory Commission**

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The U.S. Nuclear Regulatory Commission (NRC) is amending its security regulations for the transport of irradiated reactor fuel.<sup>1</sup> 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 performance standards and objectives for the protection of spent nuclear fuel (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. This rule will apply to NRC licensees authorized to possess or transport SNF.

### Introduction and Background

The NRC has long participated in efforts to address radioactive source protection and security. On June 15, 1979, the NRC published in the *Federal Register* (44 FR 34466) an interim final rule that established requirements for the physical protection of irradiated reactor

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<sup>1</sup> The terms “irradiated reactor fuel” and “spent nuclear fuel” are used interchangeably in this rule.

fuel in transit. The interim final rule added a new Section 73.37 to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73 entitled, “Physical Protection of Irradiated Reactor Fuel in Transit.” The interim rule and related guidance document designated NUREG-0561 were issued in effective form without the benefit of public comment. At the time of publication, public comments were solicited on the interim regulation and the guidance document. After considering public comments, amendments to the interim final rule and the guidance document were issued on June 3, 1980 (45 FR 37399). Section 73.37 has changed little since its promulgation in 1980.

The terrorist attacks of September 11, 2001, however, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. In response to the attacks, the NRC determined that additional security measures were needed to enhance the protection of SNF shipments from theft, diversion, or radiological sabotage. Accordingly, the NRC issued 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), to ensure that SNF is shipped in a manner that protects the common defense and security, and the public health and safety. 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.”

#### Action

This rulemaking is revising NRC regulations in 10 CFR Part 73 to enhance the security requirements applicable to licensees’ shipment of SNF. These revisions incorporate and make generically applicable the security requirements imposed on certain licensees by the Orders for SNF in Transit. In addition, these revisions incorporate new security requirements developed as

a result of lessons learned from implementing the Orders. Finally, these revisions address, in part, a 1999 petition for rulemaking from the State of Nevada (PRM-73-10) that requests that NRC strengthen the regulations governing the security of SNF shipments against malevolent acts.

This rulemaking establishes the performance standards and objectives for the protection of SNF shipments from theft, diversion, or radiological sabotage. These standards and objectives will apply to all licensees authorized to possess or transport SNF. These revisions, however, do not authorize or license the possession or use of any radioactive materials.

#### Need for the Action

This rulemaking is needed because the NRC has determined that it is necessary to enhance the security requirements for the shipment of SNF. Accordingly, the NRC is revising its regulations in 10 CFR Part 73 to incorporate and make generally applicable to all licensees shipping SNF the security requirements set forth in NRC Order EA-02-109. These revisions also incorporate additional security requirements developed as a result of lessons learned from implementing the Order requirements and conducting vulnerability assessments at certain licensees. Including these security requirements in the regulations will enhance regulatory efficiency and clarity. The NRC has determined that these security requirements will enhance adequate protection of the public health and safety and security.

#### Environmental Impact

In accordance with 10 CFR Part 51, "Environmental protection regulations for domestic licensing and related regulatory functions," this environmental assessment evaluates the

potential effects that the SNF security rulemaking may have on the environment. This proposed action imposes new or modified security requirements on licensees transporting SNF. As discussed in the following paragraphs, the NRC has concluded that there will be no significant radiological or non-radiological environmental impacts associated with implementation of the security rule requirements.

The security requirements address transportation of SNF and would not affect licensees' systems that limit the release of radiological effluents. These systems will continue to perform the same functions after the rule takes effect. As a result, there are no significant radiological effluent impacts associated with this action. The standards and requirements applicable to radiological releases and effluents are not affected by this security rulemaking and continue to apply. In addition, NRC has concluded that implementation of this rule will not impact occupational exposures.

The proposed action also does not increase the probability or consequences of accidents, nor does it result in changes to the types of any effluents that may be released offsite that could result in public exposure. Therefore, there is no significant increase in public radiation exposure as a result of this rulemaking. Accordingly, there is no significant radiological impact associated with this action.

With regard to potential non-radiological impacts, NRC concluded that implementation of this rule will not have a significant impact on the environment. No construction of new structures is required to meet the requirements in the rule. Therefore, facility footprints should not change due to the proposed action. In addition, implementation of the rule will not affect any historic site or non-radiological effluents. Therefore, there is no significant non-radiological environmental impact associated with this action.

Accordingly, the NRC concludes that there is no significant environmental impact associated with the rulemaking action.

## Alternatives to the Action

As an alternative to the action, the NRC staff considered not taking the action to revise the security regulations (i.e., the no-action alternative). Not revising the security regulations will leave the current regulatory system in place. The no-action alternative is not expected to result in any significant impact to human health or the environment.

However, under the no-action alternative, Part 73 would not include and make generically applicable the security requirements for shipment of SNF set forth in NRC orders. In addition, the security requirements in Part 73 would not reflect additional security requirements developed in response to the lessons learned from implementation of the security orders. Furthermore, the no-action alternative would also require the NRC to continue issuing individual Orders to future licensees transporting SNF. The NRC has chosen the proposed action because it most closely matches the rulemaking objectives.

## Alternative Use of Resources

The NRC has not identified any new resources that would be used for the proposed action. Therefore, there are no irreversible commitments of resources determined in this assessment.

## Agencies and Persons Consulted

The NRC requested the views of the States on the environmental assessment for the proposed rule. The NRC did not receive any comments from the States.

## Finding of No Significant Impact

Under the National Environmental Policy Act of 1969, as amended, and the NRC regulations in subpart A of 10 CFR part 51, the NRC has determined that this rule is not a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required for this rulemaking. These revisions are procedural in nature and would have no significant impact on the environment.

The determination of this environmental assessment is that there will be no significant impact to the public from this action.