

IN TRANSIT PHYSICAL PROTECTION OF SPECIAL NUCLEAR MATERIAL OF MODERATE STRATEGIC SIGNIFICANCE AND RECEIPT OF NEW REACTOR FUEL – NON-POWER REACTORS

Effective Date: 06/01/2020

PROGRAM APPLICABILITY: IMC 2545

This inspection procedure (IP) is applicable to all U.S. Nuclear Regulatory Commission (NRC) licensed non-power reactors that transport or receive a quantity of special nuclear material (SNM) of moderate strategic significance (MSS) or receipt of new reactor fuel.

81612-01 INSPECTION OBJECTIVE

The objective of this IP is to gather information to determine whether reasonable assurance exists that licensee activities, since the last inspection, were conducted in accordance with regulatory requirements in Title 10 of the *Code of Federal Regulations* (CFR) Part 73, “Physical Protection of Plants and Materials.”

01.01 Shipments of Special Nuclear Material of Moderate Strategic Significance. To assure that the licensee has adequate protection for shipments of SNM of MSS, including new reactor fuel.

81612-02 INSPECTION REQUIREMENTS

02.01 Shipments of Special Nuclear Material of Moderate Strategic Significance or new reactor fuel.

- a. For licensees who are shipping SNM of MSS:
 1. Verify that the shipper provided advanced notification to the receiver of any planned shipments specifying the mode of transport, estimated time of arrival, location of the nuclear material transfer point, name of carrier, and transport identification. [10 CFR 73.67(e)(1)(i)]
 2. Verify that the shipper received confirmation from the receiver prior to the commencement of the shipment that the receiver will be ready to accept the shipment at the planned time and location and acknowledged the specified mode of transport. [10 CFR 73.67(e)(1)(ii)]
 3. Verify that the shipper checked the integrity of the container and locks or seals prior to shipment. [10 CFR 73.67(e)(1)(iii)]

4. Verify that the shipper arranged for the in-transit physical protection of the materials, unless the receiver is a licensee and has agreed, in writing, to arrange for the in-transit physical protection. [10 CFR 73.67(e)(1)(iv)]
- b. For licensees who are receiving SNM of MSS or new reactor fuel:
1. Verify that the receiver checked the integrity of the container and seals upon receipt of the shipment. [10 CFR 73.67(e)(2)(i)]
 2. Verify that the receiver notified the shipper or exporter of receipt of the material in accordance with 10 CFR 74.15. [10 CFR 73.67(e)(2)(ii), 10 CFR 73.67(e)(6)(ii)]
 3. Verify that the receiver arranged for the in-transit physical protection of the materials, unless the shipper is a licensee and has agreed, in writing, to arrange for the in-transit physical protection. [10 CFR 73.67(e)(2)(iii)]
- c. For licensees who arranged for the in-transit physical protection of SNM of MSS or new reactor fuel:
1. Verify that the licensee arranged for telephone or radio communications between the transport and the licensee to: periodically confirm shipment status; notify of any schedule delays; and, request appropriate local law enforcement agency (LLEA) response in the event of an emergency. [10 CFR 73.67(e)(3)(i)]
 2. Verify that the licensee minimized the time that the material was in transit by minimizing the number and duration of transfers and routed the material in the most safe and direct manner. [10 CFR 73.67(e)(3)(ii)]
 3. Verify that the licensee conducted screening of employees involved in the transportation of the material in order to obtain information on which to base a decision to permit them control over the material. [10 CFR 73.67(e)(3)(iii)]
 4. Verify that the licensee established and maintained written response procedures for dealing with threats of thefts or thefts of this material and retained copies of current and superseded procedures for three years following the time period for which the licensee possesses special nuclear material. [10 CFR 73.67(e)(3)(iv)]
 5. Verify that the licensee arranged to be notified immediately of the arrival of the shipment at the destination or of any shipment that is lost or unaccounted for after the estimated time of arrival at the destination. [10 CFR 73.67(e)(3)(v)]
 6. Verify that the licensee immediately initiated a trace investigation of any shipment that is determined to be lost or unaccounted for after a reasonable time beyond the estimated arrival time. [10 CFR 73.67(e)(3)(vi)]
 7. Verify that the licensee notified the Nuclear Regulatory Commission (NRC) Headquarters Operations Center within one hour of discovery of loss and within one hour of recovery or accounting for the lost shipment of SNM in accordance with 10 CFR 73.71. [10 CFR 73.67(e)(3)(vii)]

- d. For licensee who arranged for the in-transit physical protection of strategic special nuclear material (SSNM) in quantities of MSS or new reactor fuel:
 - 1. Verify that the licensee made all shipments in either: dedicated transports with no intermediate stops to load or unload other cargo and with no carrier or vehicle transfers or temporary storage in-transit; or, under arrangements whereby custody of the shipment and all custody transfers are acknowledged by signature. [10 CFR 73.67(e)(4)(i)]
 - 2. Verify that the licensee maintained the material under lock or under the control of an individual who has acknowledged acceptance of custody of the material by signature. [10 CFR 73.67(e)(4)(ii)]
- e. Verify that licensees who import or export SNM of MSS retained records for a period of three years following the time period for which the licensee possesses special nuclear material. [10 CFR 73.67(e)(5), 10 CFR 73.67(e)(6)(i)]

81612-03 INSPECTION GUIDANCE

This section is intended to provide guidance to assist the inspector in measuring the licensee's performance in each of the preceding sections. The statements below do not represent regulatory requirements but are standards and methods by which the individual elements may be judged.

The inspector should note that not all of the inspection requirements listed above may apply (i.e. the inspected licensee will not be both the shipper and receiver). For shipments of new reactor fuel, the fuel vendor or provider may handle the arrangements for in-transit physical security. The inspector will need to discern which requirements are applicable to the licensee as the shipper, receiver, importer, and/or exporter. Some of the requirements may be assessed during the conduct of other inspection modules.

Additionally, the inspector should be aware that any written inspection notes, related to the specific details of how a licensee is in compliance with the regulatory requirements, could be security sensitive. Care should be exercised to avoid discussing or recording site-specific details and instead use general statements related to compliance with the regulations, security plans, or other commitments.

03.01 Shipments of Special Nuclear Material of Moderate Strategic Significance.

No specific guidance is available for this section.

81612-04 RESOURCE ESTIMATE

For planning purposes, the estimated, direct, onsite inspection effort to complete this inspection procedure is 4 hours. Actual inspection at any facility may require more or less effort depending on past inspection history, changes since the last inspection, conditions at the facility, and significance of the inspection findings.

81612-05 PROCEDURE COMPLETION

The inspection of each of the applicable areas described above will constitute completion of this procedure. This inspection procedure will be completed if the inspector is onsite during a receipt of special nuclear material or new reactor fuel.

81612-06 REFERENCES

Manual Chapter 2545, "Research and Test Reactor Inspection Program"

NUREG/CR-0099, "Evaluation of Road Transit Physical Protection Systems"

NUREG/CR-0100, "Estimates of Local Law Enforcement Agency Officer Availability"

NUREG-0465, "Transportation Security Personnel Training Manual"

Regulatory Guide 5.32, "Communication with Transport Vehicles"

END

Attachment:

1. Revision History Sheet for IP 81612

Attachment 1 - Revision History for IP 81612

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional, Non-Public Information)
	ML19190A273 03/13/20 CN 20-015	Initial issue to support inspection of research and test reactor programs described in IMC 2545.	None	ML19205A354