INSPECTION PROCEDURE 81608

REPORTING OF SAFEGUARDS EVENTS – NON-POWER REACTORS

Effective Date: 06/01/2020

PROGRAM APPLICABILITY: IMC 2545

81608-01 INSPECTION OBJECTIVE

The objective of this inspection procedure (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," and Part 74, "Material Control and Accounting of Special Nuclear Material."

01.01 Trace Investigations of Shipments. To assure that the licensee has appropriately reported any lost and recovered shipment of special nuclear material (SNM) or spent fuel.

01.02 Safeguards Event Reporting. To assure that the licensee has appropriately reported safeguards events.

01.03 Safeguards Event Log. To assure that the licensee has appropriately logged safeguards events.

81608-02 INSPECTION REQUIREMENTS

02.01 Trace Investigations of Shipments.

a. Verify that the licensee has notified the Nuclear Regulatory Commission (NRC) Headquarters Operations Center within one hour of discovery of loss of any shipment of SNM or spent fuel. [10 CFR 73.71(a)(1)]

b. Verify that the licensee has notified the NRC Headquarters Operations Center within one hour after recovery of or accounting for such lost shipment. [10 CFR 73.71(a)(1)]

c. Verify that the licensee has followed the initial notification by a written report within 60 days. [10 CFR 73.71(a)(4)]

d. Verify that the licensee maintained records of any written reports for a period of three years from the date of the report. [10 CFR 73.71(a)(5)]

02.02 Safeguards Event Reporting.

a. For licensees that possess more than one gram of SNM: Verify that the licensee notified the NRC Headquarters Operation Center within 1 hour of discovery of any event in which there is reason to believe that a person has committed or caused, or attempted to commit or cause, or has made a credible threat to commit or cause a theft or unlawful diversion of SNM. [10 CFR 73.71(b)(1), 10 CFR 73 App. G Para. I(a)(1), 10 CFR 74.11(a)]

b. For licensees that transport spent nuclear fuel or possess a quantity of strategic special nuclear material (SSNM) equal to or greater than a quantity of SNM of moderate strategic significance (MSS)[1]: Verify that the licensee notified the NRC Headquarters Operations Center within 1 hour of discovery of:

1. Any event in which there is reason to believe that a person has committed or caused, or attempted to commit or cause, or has made a credible threat to commit or cause significant physical damage to any facility possessing SSNM or its equipment or carrier equipment transporting nuclear fuel or spent nuclear fuel, or to the nuclear fuel or spent nuclear fuel a facility or carrier possesses. [10 CFR 73.71(b)(1), 10 CFR 73 App. G Para. I(a)(2)]

2. An actual entry of an unauthorized person into a protected area (PA), material access area (MAA), controlled access area (CAA), vital area (VA), or transport. [10 CFR 73.71(b)(1), 10 CFR 73 App. G Para. I(b)]

3. Any failure, degradation, or the discovered vulnerability in a safeguard system that could allow unauthorized or undetected access to a PA, MAA, CAA, VA, or transport for which compensatory measures have not been employed. [10 CFR 73.71(b)(1), 10 CFR 73 App. G Para. I(c)]

c. For licensees that transport spent nuclear fuel or possess a formula quantity (FQ) of SSNM: Verify that the licensee notified the NRC Headquarters Operations Center within 1 hour of discovery of the actual or attempted introduction of contraband into a PA, MAA, VA, or transport. [10 CFR 73.71(b)(1), 10 CFR 73 App. G Para. I(d)]

d. Verify that the licensee has followed initial notification by a written report within 60 days. [10 CFR 73.71(a)(4), 10 CFR 73.71(b)(2)]

e. Verify that the licensee maintained records of written reports for a period of three years from the date of the report. [10 CFR 73.71(a)(5), 10 CFR 73.71(b)(2)]

02.03 Safeguards Event Log.

a. For licensees that transport spent nuclear fuel or possess a quantity of SSNM equal to or greater than SNM MSS: Verify that the licensee maintains a current log of safeguards events recorded within 24 hours of discovery to include:

[1] more than 1,000 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope) or more than 500 grams of uranium-233 or plutonium, or in a combined quantity of more than 1,000 grams when computed by the equation, grams = (grams contained U-235) + 2(grams U-233 + grams plutonium) [10 CFR 73.2]

1. Any failure, degradation, or discovered vulnerability in a safeguards system that could have allowed unauthorized or undetected access to a PA, MAA, CAA, VA, or transport had compensatory measures not been established. [10 CFR 73.71(c), 10 CFR 73 App. G Para. II(a)]

2. Any other threatened, attempted, or committed act not previously defined in the regulations with the potential for reducing the effectiveness of the safeguards system below that committed to in a licensed physical security or contingency plan or the actual condition of such reduction in effectiveness. [10 CFR 73.71(c), 10 CFR 73 App. G Para. II(b)]

b. Verify that the licensee maintained logs of any safeguards events for three years after the last entry in each log or until the license is terminated. [10 CFR 73.71(c)]

81608-03 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, to the extent practicable, should check the NRC Headquarters Operations Center records for reports of events before departing for the site. This provides a list to compare to the licensee's log of events, and will show the date of receipt of written reports as opposed to the date of mailing which the licensee's logs may contain.

Definitions of FQ, SNM of low strategic significance, SNM of MSS, and SSNM can be found in 10 CFR 73.2 and Inspection Manual Chapter 2545.

03.01 Trace Investigations of Shipments.

In addition to lost or unaccounted shipments, the inspector should note these notifications may also be conducted for shipment that have not arrived at their destination by the estimated time of arrival.

03.02 Safeguards Event Reporting.

The inspector should note that references to the licensee's safeguards system are generally synonymous with the physical security system as described by the NRC-approved physical security plan. The time period allowed for reporting of events begins upon discovery of the event by any member of the security organization or any other employee of the licensee.

The inspector is not expected to make the sole determination on the adequacy and appropriateness of any safeguards event reports; however, the reports should provide sufficient information to allow a reader to understand the circumstances of the event, analysis conducted to determine the cause of the event, and the short-term and long-term corrective actions taken by the licensee.

03.03 Safeguards Event Log.

The time period allowed for logging of events begins upon discovery of the event by a member of the security organization or any employee of the licensee.

81608-04 RESOURCE ESTIMATE

For planning purposes, the estimated, direct, onsite inspection effort to complete this inspection procedure is 1 hour. 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.

81608-05 PROCEDURE COMPLETION

The inspection of each of the applicable areas described above will constitute completion of this procedure. The frequency at which this inspection procedure is to be completed is dependent on the quantity of SNM possessed and is described in Manual Chapter 2545. The typical frequencies are biennially for facilities possessing SNM MSS or triennially for facilities possessing SNM LSS.

81608-06 REFERENCES

Regulatory Guide 5.62, “Reporting of Safeguards Events”

Manual Chapter 2545, “Research and Test Reactor Inspection Program”

END

Attachment:
1. Revision History Sheet for IP 81608

Attachment 1 - Revision History for IP 81608

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)
	ML19190A272 03/13/20 CN 20-015	Initial issue to support inspection of research and test reactor programs described in IMC 2545.	None	ML19205A354