INSPECTION PROCEDURE 71125 ATTACHMENT 04

PUBLIC RADIATION SAFETY ONSITE INSPECTION

Effective Date: July 1, 2026

PROGRAM APPLICABILITY: IMC 2515 A

CORNERSTONES: Public Radiation Safety

INSPECTION BASES: See IMC 0308 Attachment 2

SAMPLE REQUIREMENTS:

Sample Requirements		Minimum Baseline Sample Completion Requirements		Budgeted Range	
Sample Type	Section(s)	Frequency	Sample Size	Samples	Hours
Effluent Monitoring Calibration and Testing Program	03.01	Triennial	2 per site	2-3 per site	36-40 per site
Radiological Effluent Walkdowns and Observations	03.02	Triennial	1 per site	1 per site	
Environmental Monitoring Equipment and Sampling	03.03	Triennial	1 per site	1 per site	
Radioactive Material Storage and Control	03.04	Triennial	1 per site	1 per site	
Solid Radioactive Waste System Walk-Down	03.05	Triennial	1 per site	1 per site	
Shipment Preparation and Records	03.06	Triennial	2 per site	2-3 per site	

71125.04-01 INSPECTION OBJECTIVES

01.01 To verify the gaseous and liquid effluent processing systems are maintained so that radiological discharges are properly mitigated, monitored, and evaluated with regard to public exposure.

01.02 To verify that abnormal radioactive gaseous or liquid discharges and conditions, are controlled in accordance with applicable regulatory requirements and licensee procedures.

01.03 To verify licensees' quality control program ensures radioactive effluent sampling and analysis requirements are satisfied so that discharges of radioactive materials are adequately quantified and evaluated from all established release points and any unmonitored and uncontrolled discharge path.

01.04 To verify that the Radiological Environmental Monitoring Program (REMP) quantifies the impact of radioactive effluent releases to the environment and sufficiently validates the integrity of the radioactive gaseous and liquid effluent release program.

01.05 To verify that the REMP is implemented consistently with the licensee's technical specifications (TS) and/or offsite dose calculation manual (ODCM) and to validate that the radioactive effluent release program meets the criteria reflected in the licensees radioactive effluent technical specifications.

01.06 To verify that the REMP (1) monitors noneffluent exposure pathways (e.g., onsite spills or leaks, exposures from direct and scattered (sky shine) radiation from plant facilities and components), (2) is based on sound principles and assumptions, and (3) validates that doses to members of the public are within the dose limits of 10 CFR Part 20, "Standards for Protection against Radiation," and 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," as applicable.

01.07 To verify the effectiveness of the licensee's programs for processing, handling, storage, and transporation of radioactive material.

01.08 To conduct a routine review of problem identification and resolution activities per Inspection Procedure (IP) 71152, "Problem Identification and Resolution."

71125.04-02 GENERAL GUIDANCE

Whenver possible, inspectors should coordinate the inspection schedule with the licensee to coincide with risk-significant activities so that licensee performance can be directly observed.

To the extent possible, perform in-office preparation before the inspection, and complete the remaining inspection planning and follow-up actions during the onsite aspects of the inspection.

a. Event Reports and Effluent Report Reviews

   Ensure that docketed reports since the previous inspection are included in the current inspection (e.g., annual radioactive effluent release reports, special 30-day reports, supplemental monitoring reports, offsite dose calculation manual revisions). Consider scheduling this inspection soon after the annual radiological environmental report has been developed such that recent data can be compared between the effluent report and the environmental reports.

   1. Review the Annual Radiological Effluent Release Report(s) issued since the last inspection. Determine if the reports were submitted as required by the ODCM/Technical Specifications. Note any anomalous results, unexpected trends or

abnormal releases identified by the licensee for further inspection to determine if they were evaluated, were entered in the corrective action program and were adequately resolved.

b. ODCM and FSAR Reviews

1. Review FSAR descriptions of the radioactive effluent monitoring systems, treatment systems, and effluent flow paths so they can be verified during inspection walkdowns.

2. Review changes to the ODCM made by the licensee since the last inspection. If differences are identified, review the technical basis or evaluations of the change during the onsite inspection, to determine whether they were technically justified.

   Changes to the ODCM are submitted to NRC, as required.

   Review changes against the guidance in the following documents, as applicable to the licensing basis:

   (a) NUREG-1301, “Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors,”

   (b) NUREG-1302, “Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors,”

   (c) NUREG-0133, “Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants,”

   (d) Regulatory Guide (RG) 1.109, “Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR 50, Appendix I,”

   (e) RG 1.21, “Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste,”

   (f) RG 4.1, “Radiological Environmental Monitoring for Nuclear Power Plants,” and

   (g) RG 4.15, “Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination)—Effluent Streams and the Environment.”

3. If applicable, evaluate the licensee’s management of non-radioactive systems that have become contaminated since the last inspection. Determine if any of the newly contaminated systems have an unmonitored effluent discharge path to the environment, whether any required ODCM revisions were made to incorporate these new pathways and whether the associated effluents were reported as required.

   During the onsite inspection, review any event reports, ODCM entries and 10 CFR 50.59 evaluations that have been performed for systems that have been identified as contaminated since the last inspection. Bulletin 80-10 provides guidance on contaminated systems not originally designed to be contaminated.

c. Procedures, Special Reports, and Other Documents

1. Review LERs, event reports and/or special reports related to the effluent program issued since the previous inspection. Identify any additional focus areas for the inspection based on the scope/breadth of problems described in these reports.

2. Review effluent program implementing procedures, particularly those associated with effluent sampling, effluent monitor set point determinations and dose calculations.

3. Review copies of licensee and third party (independent) evaluation reports of the effluent monitoring program since the last inspection for insights into the licensee's program and to aid the inspector in selecting areas for review (smart sampling). Such reports include Quality Assurance (QA) reports and reports describing the results of the inter-comparison program with third party analytical laboratories.

Review the Annual Radiological Environmental Operating Reports (AREOR) and the results of any licensee assessments since the last inspection to enable verifying that the REMP was implemented in accordance with the TS and ODCM. Review the AREOR for changes to the ODCM with respect to environmental monitoring, commitments in terms of sampling locations, monitoring and measurement frequencies, land use census, inter-laboratory comparison program, and analysis of data.

Review the ODCM to identify locations of environmental monitoring stations.

Review the final safety analysis report (FSAR) for information regarding the environmental monitoring program and meteorological monitoring instrumentation.

Review quality assurance audit results of the program to assist in choosing inspection "smart samples." If the licensee uses a vendor laboratory to analyze the REMP samples, review any audits and technical evaluations performed on the vendor's program.

Review the annual effluent release report and the 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," report, to determine if the licensee is sampling, as appropriate, for the predominant and dose-causing radionuclides likely to be released in effluents.

Whenever possible, inspectors should coordinate the inspection schedule with the licensee to coincide with risk-significant activities so that licensee performance can be directly observed.

Inspectors should review the solid radioactive waste system description in the Final Safety Analysis Report (FSAR), the Process Control Program (PCP), and the most recent Annual Radiological Effluent Release Report (ARERR) for information on the types and amounts of radioactive waste disposed.

Inspectors should review results of radiation protection program audits related to this area (e.g., licensee's quality assurance (QA) audits, self-assessments, access authorization program reviews, Part 37 security program reviews or independent audits) since the last inspection. The reviews of these audits should be used to gain insights into overall licensee performance and focus the inspector's activities consistent with the principle of "smart sampling."

Inspectors should review the radioactive waste and radioactive shipment records since the last inspection. These records should be used to gain insights into the radioactive material shipments made and the type of transport packages used.

Per IP 71152, it is expected that routine reviews of PI&R activities should equate to approximately 10 to 15 percent of the resources estimated for the associated baseline cornerstone procedures, this is a general estimate only based on the overall effort expected to be expended in each strategic performance area. It is anticipated that the actual hours required to be expended may vary significantly from attachment to attachment, depending on the nature and complexity of the issues that arise at the particular facility. Overall, an effort should be made to remain within the 10 to 15 percent estimate on a strategic performance area basis. Inspection time spent assessing PI&R as part of the baseline procedure attachments should be charged to the corresponding baseline procedure.

71125.04-03 INSPECTION REQUIREMENTS

03.01 Effluent Monitoring Calibration and Testing Program Sample

Verify effluent monitoring and flow measurement instrumentation are appropriately calibrated and/or tested and that monitor alarm set points are established consistent with applicable procedures.

Specific Guidance

a. Select at least one of each type of effluent monitor instrumentation (such as gaseous, liquid, etc.), focus on point of discharge effluent monitors. Review that (a) the licensee calibrates its monitors with NIST traceable sources; (b) if a primary calibration, it adequately represents the plant nuclide mix/source term; (c) if a secondary calibration, it verifies the primary calibration; and (d) the channel calibrations encompass the instrument's alarm set points.

   If an instrument is not calibrated correctly, review the licensee's assessment of the potential impact on public doses, and assess the impact with respect to radiological control or emergency preparedness. Notify regional EP inspector if any issues are found with effluent monitors found in the licensee's approved emergency action level scheme.

b. For changes to effluent monitor set points, evaluate the basis for changes to ensure that an adequate justification exists. Consider if the set points are based on an appropriate effluent radionuclide (noble gas) mix so as not to exceed the effluent dose limits in 10 CFR Part 20 and the design constraints in reflected in the radiological effluent technical specifications. The radionuclide mix used in the calculation should be the same as or more conservative (lower average energy) than the licensee's actual source term mix.

c. Review the methodology the licensee uses to determine the effluent stack and vent flow rates. Consider differences between assumed and actual stack and vent flow rates and if the results of the projected public doses are affected. If available, review historical trends in vent/stack flow rates to determine if substantial variability exists, potentially indicating flow restrictions in the measuring device or fan motor problems.

d. Review surveillance test results for effluent discharge ventilation systems. Consider the standby gas treatment system for BWRs and the containment/auxiliary building ventilation system for PWRs. Coordinate with the resident inspectors before inspecting safety-related ventilation systems to avoid duplication of effort.

e. Consider if the licensee has the capability to collect and analyze high-range, post-accident iodine and particulate effluent samples and if high-range effluent monitors are calibrated and available. Note: Inform regional emergency preparedness staff of issues that impact monitors credited in licensee emergency preparedness plans.

   1. Focus reviews on high-range effluent monitors or other effluent/process monitors that are relied on by the licensee in its emergency operating procedures (EOPs) as a basis for triggering emergency action levels (EALs) and subsequent emergency classifications, or to make protective action recommendations (PARs) during an accident. Refer to site-specific licensing basis information (e.g., FSAR, T.S. etc.) and NUREG-0737 for information on post-accident monitoring and instrumentation.

      As feasible, observe electronic and radiation calibration of these instruments and consider if the calibrations conform with the licensee's calibration and test protocols.

Consider if monitor operation is appropriate for the setpoint value (e.g., the setpoint is not affected by the monitor switching from mid-range to high-range or a purge function that actuates upon shifting of ranges).

03.02 Walk Downs and Observations Sample

Walk down selected effluent monitoring, ventilation and discharge systems to verify that the current system configurations, flow paths and operation are consistent with the descriptions in the FSAR, ODCM, and site procedures.

Specific Guidance

a. Focus on any flow measurement devices and all accessible point-of-discharge liquid and gaseous effluent monitors of the selected systems. Look for monitor degradation and out-of-service tags. For effluent sampling systems, look for indications of non-representative sampling such as severe bends in sample line tubing, non-isokinetic sampling, or lack of heat tracing in areas where temperature extremes could have an impact (causing condensation and plate-out). Additionally, be alert to degraded ventilation system connections (e.g., flexible duct connectors) that could contribute to releases.

b. Be alert for potential unmonitored release points (such as open roof vents in BWR turbine decks, temporary structures butted against turbine, auxiliary or containment buildings), building alterations which could impact airborne, or liquid, effluent controls, and ventilation system leakage that communicates directly with the environment. Be aware of system contamination that may have impacted otherwise non-contaminated systems (e.g., PWR turbine sumps, plant boilers, RHR heat exchangers, etc.).

c. Identify conditions that would impact the performance, or the effluent monitoring capability, of the system. Conditions that may impact ventilation system performance

include degraded HEPA/charcoal banks, improper alignment, or system installation issues.

d. When possible for gaseous waste processing, observe the routine processing and discharge of effluents. Consider if appropriate treatment equipment is used and the processing activities align with discharge permits.

e. When possible for liquid waste processing, observe the routine processing and discharge of effluents. Consider if appropriate treatment equipment is used and the processing activities align with discharge permits.

f. Consider if significant changes, since the last inspection, to the licensee's effluent release points were adequately evaluated.

In general, discharge points that are secondary dispersion/dilution points (i.e., those originating from authorized effluent discharges such as rain-out into storm drains or drainage from equipment condensation, including freezers) do not need further evaluation (see RIS 2008-03). However, the discharge of radioactive material from unusual discharge points (e.g., pumping of water from cable trays) needs an evaluation prior to discharge. This evaluation can be a bounding evaluation for less significant release points (see RG 1.21, Rev. 2). Some changes may require the licensee to perform a 10 CFR 50.59 evaluation (e.g., burning contaminated oil in an auxiliary boiler). Consider if changes require NRC approval

03.03 Environmental Monitoring Equipment and Sampling Sample

Verify licensee environmental monitoring equipment is properly located, calibrated and maintained and observe the collection of environmental samples.

Specific Guidance

a. Walk down air sampling stations and direct radiation monitoring stations (e.g., thermoluminescent dosimeters [TLD]) and consider if they are located as described in the ODCM and to determine the equipment material condition.

Consistent with smart sampling, the air sampling stations should be selected based on the locations in the downwind sectors with the highest concentration per unit release rate (X/Q), and highest deposition per unit release rate (D/Q), and direct radiation monitoring stations should be selected based on the most risk-significant locations (e.g., those that have the highest potential for public dose impact). In general, consider if sample equipment will yield representative results and that there are no obstructions near the station that may impact results. Shifts in wind sectors with the highest X/Q and D/Q may be detected by comparing several years of the licensee's meteorological data.

b. For the air samplers selected, consider if the calibration and maintenance records demonstrate adequate operability of these components.

c. As available, review the calibration & maintenance (or volume verification) records of composite water samplers.

d. Observe the collection and preparation of samples from different environmental media and consider whether the environmental sampling is representative of the release pathways as specified in the ODCM and whether sampling techniques are in accordance with procedures.

e. Based on direct observation and review of records, consider if the meteorological instruments are operable, calibrated, and maintained in accordance with guidance contained in the FSAR, and licensee procedures. Consider whether the meteorological data readout and recording instruments in the control room and, if applicable, at the tower are operable.

   Compare readout data (i.e., wind speed, wind direction, and delta temperature) in the control room and at the meteorological tower to identify any differences that would indicate that inaccurate data are being used for dose determination.

03.04 Radioactive Material Storage and Control Sample

Verify radioactive materials are controlled, labelled and secured against unauthorized removal.

Specific Guidance

Note: When providing oversight of protection of material under Part 37, there may be overlap with activities in the Physical Security Cornerstone. Additionally, oversight of Part 37 should focus on material that is located outside of the licensee's protected area A preplanned inspection sample that is intended to assess licensee performance as it relates to Part 37 material that is located inside of the Protected Area is generally not risk-informed and requires additional justification and Regional BC approval. Consult regional security inspection staff to determine how to disposition issues involving radioactive material protection that reveal potential violations of 10 CFR Part 73 requirements. NRC Regulatory Information Summary 2015-15, "Information Regarding a Specific Exemption in the Requirements for the Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," provides information on the relationship between the 10 CFR Part 73 security plan and 10 CFR Part 37 requirements.

Note: In August of 2024, the NRC published an Interim Enforcement Policy (IEP) that allows staff to exercise enforcement discretion for certain violations of regulations involving robust structures containing Category 1 or Category 2 quantities of radioactive material, or to large components containing Category 1 or 2 quantities of radioactive material, provided the licensee meets certain conditions (89 FR 68083). This IEP is located in Section 9.3 of the Enforcement Policy. Performance deficiencies within the scope of the IEP (i.e., involving Category 1 or Category 2 radioactive material in large components or robust structures, as defined in the EGM, where the underlying violation qualifies for enforcement discretion) are to be dispositioned as minor violations. However, these minor violations shall be documented in inspection reports in accordance with IMC 0611, section 0611-12, and—for tracking purposes—issued a new enforcement action (EA) number each time enforcement discretion is granted. In these cases, the justification for the issue being dispositioned as a minor violation is the extremely low risk associated with theft or diversion of radioactive material contained in large components and robust structures as described in IEP. Once a licensee has an existing case of enforcement discretion which was provided either through the IEP or through Enforcement Guidance Memorandum (EGM) 2014-001—which preceded the

IEP—follow-on inspections should only verify significant changes to circumstances that would necessitate reconsideration of the discretion. If there are no significant changes to circumstances that would necessitate reconsideration of discretion, then do not include this item within the scope of the inspection sample.

a. Consider inspection of temporary radioactive material storage areas that are established to support plant outage activities as well as long-term storage facilities that can be inspected during non-outage periods.

b. Consider if the licensee is performing periodic container inspections sufficient to meet applicable requirements.

c. Select a representative sample of containers of stored radioactive materials, and observe for signs of swelling, leakage, and deformation. Consider if buildup of any gases produced by waste decomposition or chemical reactions results in container deformation or loss of container integrity.

d. For radioactive materials in controlled or unrestricted areas consider if they are secured against unauthorized removal or access; if they are controlled and maintained under constant surveillance; and if they are physically protected, as required.

e. Consider if the licensee has adequately evaluated radioactive material to determine if the material contains aggregated quantities of Category 1 or Category 2 material as defined by 10 CFR Part 37. In general, a risk-informed inspection approach should focus on material that is located outside of the protected area (PA), as described in the 10 CFR Part 73 security plan, or that has the potential to be moved outside of the PA.

f. Consider if the personnel who implement the 10 CFR Part 37 security plan (e.g., security staff and health physics staff) are trained and receive refresher training.

g. Discuss performance of the licensee's Part 37 program (since last inspection) with the appropriate licensee staff. Review the annual security program review noting potential overlap with inspections conducted under the Security Cornerstone. While 10 CFR 37 does not involve safeguards information, it is possible that inspectors can encounter safeguards information during this inspection in situations when Part 73 measures are being credited to meet Part 37 requirements. It is acceptable for licensees to combine Part 37 security reviews with Part 73 security program reviews. Differences in periodicities for program review requirements between Part 37 and Part 73 do not introduce a risk-significant issues that should be inspected in and of themselves. Inspectors should consider the following:

    1. For material located outside of the PA, failures of equipment used to detect the unauthorized removal of Category 1 and Category 2 material;

    2. For material located outside of the PA, failures to maintain continuous surveillance of Category 1 material during periods when physical barriers or intrusion detection systems were disabled (e.g., during periods of movement);

    3. For radioactive waste that is located outside of the PA and that contains Category 1 or Category 2 quantities of radioactive material, failures to correctly apply the exemption criteria of 10 CFR 37.11(c);

4. Failures to respond appropriately to any actual or attempted theft or diversion of Category 1 or Category 2 material;

5. Failures to notify the local law enforcement agency (LLEA) or the NRC of an actual theft or diversion of a Category 1 or Category 2 quantity of radioactive material, or of LLEA to respond to notifications as coordinated with the site; and

6. Actual cases where Category 1 or Category 2 radioactive material was accessed by unauthorized individuals, stolen or diverted from its intended location.

h. Select sealed sources from the licensee's inventory that present the greatest radiological risk. Consider if the sources are accounted for and have been verified to be intact (i.e., they are not leaking their radioactive content).

Licensees are required under 20.1501(a)(2) to conduct surveys that may be necessary to comply with Part 20 and that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels; evaluate quantities of radioactivity; and evaluate potential radiological hazards.

Some plants have technical specification (TS) requirements to inventory and leak test sources greater than a certain activity (e.g., > 100 microcurie beta/gamma, and 5 microcurie alpha activity). Other plants may have moved this requirement to a licensee-controlled document. In cases where the specific requirements, as stated in a plant's license, are different than the applicable regulations, licensees are obligated to meet the specific requirements as stated in their license. Therefore, it is possible that a licensee would be obligated to leak test sources that are otherwise exempt from leak testing per NRC regulations. For example, if that licensee's TS contains a provision that generically states that sources above a certain level require leak testing.

The focus of this specific inspection item is on sealed sources that present the greatest radiological risk in the event their leakage is not adequately monitored. Devices that only contain exempt concentrations (10 CFR 30.14) or exempt quantities (10 CFR 30.18); or certain devices that are exempt from NRC materials licensing requirements under 10 CFR 30.15, 10 CFR 30.19, 10 CFR 30.20 or 10 CFR 30.22; or devices that contain generally licensed by-product materials that are exempt from leak testing as described in 10 CFR 31.5(c)(2)(i) or (ii) do not require leak testing per NRC regulations and do not fall within the scope of this inspection item. Performance deficiencies that result from licensees failing to leak test sources that require leak testing by a TS or a procedure but are exempt per NRC regulations specifically listed in this paragraph should be dispositioned as minor violations.

High activity irradiators/calibrators are required to be registered in the NRC Sealed Source and Device Registry (SSDR). The SSDR lists which sources can be used in a particular device, the frequency for leak tests, the ANSI Category (ANSI CAT I is a self-shielded irradiator whereas a CAT II would fall under 10 CFR Part 36, "Licenses and Radiation Safety Requirements for Irradiators"), conditions of normal use, and other information related to the use of the device.

Routine maintenance can be performed by licensee personnel, but non-routine maintenance must be performed by the device manufacturer (or distributor) or a person specifically authorized by NRC or an Agreement State.

i. Determine if any transactions since the last inspection involving nationally tracked sources were reported in accordance with 10 CFR 20.2207.

03.05 Solid Radioactive Waste System Walk-Down Sample

Walkdown accessible portions of a solid radioactive waste system and verify that the selected system is correctly configured and able to perform its intended function.

Specific Guidance

a. Consider radioactive waste processing equipment that is abandoned in place and evaluate licensee controls to ensure that the equipment will not contribute to an unmonitored release path and is isolated from operating systems.

b. Consider radioactive waste processing equipment that is not operational and has not been abandoned in place and evaluate licensee actions to repair and return the equipment to service. Consider if the licensee is meeting TS requirements on the use of radioactive waste processing equipment.

c. Review any changes made to the radioactive waste processing system. Consider if changes from what is described in the FSAR were reviewed and documented as required, and, if applicable, that the licensee has reviewed the safety significance of equipment abandoned in place. If the licensee uses a vendor to perform onsite waste handling or processing, consider if any changes in the system configuration were made in accordance with vendor manuals, diagrams and procedures.

d. Consider if solid radioactive waste is processed consistent with the PCP and licensee procedures.

e. For those systems that provide tank recirculation, consider if the tank recirculation procedure provides sufficient mixing. Generally, a minimum of three volumes of mixing is provided. See ASTM D3370-10, “Standard Practices for Sampling Water from Closed Conduits” section 11.4 for tank recirculation information and section 12.2 for sample line flushing.

f. The licensee’s PCP should correctly describe the current methods and procedures for dewatering and waste stabilization. Consider the process the licensee uses for the removal of freestanding liquid; particularly prior to shipment. If the licensee uses an on-site vendor to perform dewatering or waste stabilization, inspect the methods and procedures to assure compliance with vendor manuals, diagrams and procedures.

03.06 Shipment Preparation and Records Sample

Verify the adequacy of a non-excepted package shipment through observation or record review.

Specific Guidance

a. Consider if the licensee selected the correct package for shipment.

b. Consider reviewing non-excepted package shipment (LSA I, II, III; SCO I, II; Type A or Type B) records. As a minimum, consider if the shipping documents indicate the proper

shipping name; emergency response information and a 24-hour contact telephone number; accurate curie content and volume of material; and appropriate waste classification, transport index, and United Nations (UN) identification number. Also consider if the shipment marking, labeling, and placarding is consistent with the information in the shipping documentation.

c. Inspectors should focus on the most important parameters such as waste volume, waste weight, allowable void space and radiological survey information, and isotopic analysis (including hard-to-detects).

d. For packages characterized using specific activity calculations, the inspectors should focus on the representativeness of the sample used (e.g., was the waste mixed adequately prior to obtaining a sample); see ASTM D3370-10. For packages characterized by dose-to-curie methodology, the inspectors should focus on the adequacy of the radiological survey information used (e.g., were measurements taken at the appropriate distance and was a current survey date used).

~~e.~~ Consider if site personnel involved in the preparation and shipment of radioactive material are trained and qualified in accordance with licensee procedures and applicable regulations.

f. Consider how the licensee meets requirements for HRCQs of materials in transport, if applicable.

g. For Type B shipments, consider if the requirements of the transport package Certificate of Compliance (CoC) have been met; that the user is a registered package user and has an NRC approved QA program; and that the licensee followed procedures for cask loading and closure procedures consistent with the vendor's current approved procedures.

h. For non-Type B shipments (Type A, Industrial Package, General Design packages), consider if the shipment is made in accordance with the package quality documents.

i. Consider if the licensee's procedures for package loading and closure procedures are followed and are consistent with the vendor's current approved procedures.

j. For shipments of Category 1 or Category 2 material, consider if the licensee met the requirements for recipient's license verification.

k. For shipments of Category 1 or Category 2 material, review documentation describing preplanning and coordination activities as follows.

    1. For shipments of Category 1 material, consider if adequate movement control centers are established; if communications are adequate; if the driver is provided with an accompanying individual (if applicable); and if the driver is provided with written normal and contingency procedures.

    2. For shipments of Category 2 material, consider if the shipment is in constant control and surveillance of the licensee (or carrier); if the licensee (or carrier) has the capability to immediately establish communications; and, for situations when a licensee uses a carrier, if the carrier requires an authorized signature prior to release of the material for delivery.

l. Consider if the licensee satisfied the advanced notification requirements applicable to Category 1 material shipments.

71125.04-04 REFERENCES

10 CFR Part 71, “Packaging and Transportation of Radioactive Material”

40 CFR Part 190, “Environmental Radiation Protection Standards for Nuclear Power Operations”

49 CFR Part 172, Subpart H, “Training”

RG 1.21, “Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste”

RG 1.23, “Meteorological Monitoring Programs for Nuclear Power Plants”

RG 1.33, “Quality Assurance Program Requirements (Operation)”

RG 1.109, “Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I”

RG 1.181, “Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)”

RG 1.187, “Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments”

RG 4.1, “Radiological Environmental Monitoring for Nuclear Power Plants”

RG 4.15, “Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination)—Effluent Streams and the Environment”

RG 4.22, “Decommissioning Planning During Operations”

RG 7.7, “Administrative Guide for Verifying Compliance with Packaging Requirements for Shipping and Receiving of Radioactive Material”

RG 7.10, “Establishing Quality Assurance Programs for Packaging Used In Transport Of Radioactive Material”, Revision 3

RG 8.8, “Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be as Low as Is Reasonably Achievable”

NUREG-0133, “Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants”

NUREG-0737, “Clarification of TMI Action Plan Requirements”

NUREG-1301, “Offsite Dose Calculation Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors”

NUREG-1302, “Offsite Dose Calculation Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors”

NUREG-1556, Volume 18, “Program-Specific Guidance About Service Provider Licenses,” August 2017

NUREG-1576, “Multi-Agency Radiological Laboratory Analytical Protocols Manual”

NUREG-1608, “Categorizing and Transporting Low Specific Activity Materials and Surface Contaminated Objects”

NUREG-1660, “U.S.-Specific Schedules for Transport of Specified Types of Radioactive Material Consignments”

NUREG-2155, “Implementation Guidance for 10 CFR Part 37, ‘Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material”

NUREG-2166, “Physical Security Best Practices for the Protection of Risk-Significant Radioactive Material”

NUREG/BR-0204, “Instructions for Completing NRC's Uniform Low-Level Radioactive Waste Manifest”

NUREG/CR-5569, Rev. 1, “Health Physics Positions Data Base” (HPPOS 040 and 229)

NRC Documents

NRC Bulletin 1979-19, “Packaging of Low-Level Radioactive Waste for Transport and Burial,” August 10, 1979

NRC Bulletin 1980-10, “Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release to Environment”

NRC Generic Letter 1989-01, “Implementation of Programmatic and Procedural Controls for Radiological Effluent Technical Specifications”

NRC Information Notice 1986-20, “Low-Level Radioactive Waste Scaling Factors, 10 CFR Part 61,” March 28, 1986

NRC Information Notice 1990-50, “Minimization of Methane Gas in Plant Systems and Radwaste Shipping Containers,” August 8, 1990

NRC Regulatory Issue Summary (RIS) 2008-03, “Return/Re-use of Previously Discharged Radioactive Effluents”

NRC RIS 2008-32, “Interim Low Level Radioactive Waste Storage at Reactor Sites”

NRC RIS 2015-02, “Reporting Of H-3, C-14, Tc-99, and I-129 On the Uniform Waste Manifest”

NRC RIS 2015-15, “Information Regarding a Specific Exemption in the Requirements for the Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material”

NRC, “Liquid Radioactive Release Lessons Learned Task Force Report” (ML062650312)

NRC, Safety Guide 23, “Onsite Meteorological Programs”

NRC, “An Acceptable Radiological Environmental Monitoring Program” (ML010710060)

NRC, “Revised Staff Technical Position on Waste Form (SP-91-13),” January 30, 1991 (ML033630746)

NRC, “Concentration Averaging and Encapsulation Branch Technical Position, Vol. 1,” February 2015 (ML12254B065)

NRC, “Concentration Averaging and Encapsulation Branch Technical Position, Vol. 2,” February 2015 (ML12326A611)

NRC, “Changes to the Radioactive Material Packaging and Transportation Regulations” (ML16004A174)

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NEI 07-10A, “Generic FSAR Template Guidance for Process Control Program” (ML091460627)

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NEI 96-07, Rev. 1, “Guidelines for 10 CFR 50.59 Evaluations” (ML003686043)

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ANSI N13.1-1969, “Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities”

ANSI N13.10-1974, “Specification and Performance of On-site Instrumentation for Continuously Monitoring Radioactivity in Effluents”

ANSI N42.18-2004, “Specification and Performance of Onsite Instrumentation for Continuously Monitoring Radioactivity in Effluents”

ASME N510-1989, “Testing of Nuclear Air Treatment Systems”

END

Attachment 1: Revision History for IP 71125.04

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)
	ML26113A464 05/01/26 CN 26-019	Reissuance and consolidation of IP 71124 series. These revisions were recommended as a result of the ADVANCE Act 507 Report to Congress that discussed the revision of the ROP Baseline Inspection Program.		ML25274A088