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## INSPECTION PROCEDURE 71125

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### RADIATION SAFETY—PUBLIC AND OCCUPATIONAL

Effective Date: July 1, 2026

PROGRAM APPLICABILITY: IMC 2515 A

#### 71125-01 INSPECTION OBJECTIVE

To independently gather sufficient information by performing a minimum level of baseline inspection to determine whether licensee performance meets the following cornerstone objectives:

- 01.01 Public Radiation Safety (P). To ensure adequate protection of public health and safety from exposure to radioactive material released into the public domain as a result of routine civilian nuclear reactor operations.
- 01.02 Occupational Radiation Safety (O). To ensure adequate protection of worker health and safety from exposure to radiation or radioactive material during routine civilian nuclear reactor operations.

#### 71125-02 INSPECTION REQUIREMENTS

02.01 Inspection Planning. Plan and perform inspections in accordance with the following attachments to this procedure:

- Attachment 01: Radiological Performance (O)
- Attachment 02: Radiological Performance - Remote Inspection (O, P)
- Attachment 03: Occupational Radiation Protection Onsite Inspection (O)
- Attachment 04: Public Radiation Protection Onsite Inspection (P)

The above list indicates the cornerstones that typically apply to each inspection procedure. Findings from these inspections must be categorized by the inspector into the cornerstone to which they best apply (see inspection guidance tables in the procedures and cornerstone charts in Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program—Operations Phase," Appendix A, Attachment 2, for guidance). Each finding must be aligned with only one cornerstone following application of the significance determination process (SDP), described in IMC 0609, "Significance Determination Process," to avoid double-counting in assessing performance. Some of the potential findings within the inspectable areas of this inspection procedure impact the licensee's ability to respond to the radiological conditions during an accident, such as findings associated with respiratory protection devices (e.g., self-contained breathing apparatus) or radiation monitoring instrumentation necessary to control radiation exposure of emergency workers. The significance of these findings related to emergency preparedness should normally be assessed against the SDP in IMC 0609, Appendix B.

- 02.02 Problem Identification and Resolution (PI&R). Using the inspection attachments listed above, review a selected sample of issues, verify that the issues are being identified and resolved, and verify, for a selected sample of related problems, the effectiveness of the licensee's corrective actions. IP 71152, "Problem Identification and Resolution (PI&R)," provides further guidance on Routine Reviews of PI&R activities.
- 02.03 Third-Party Reviews. Review significant site-specific, third-party evaluation reports for insights into the licensee's program and to aid in selecting areas (samples) for review. Institute of Nuclear Power Operations (INPO) reports are normally reviewed by resident inspectors only. Coordinate with the residents and review regional policy before reviewing INPO documents.

## 71125-03 INSPECTION GUIDANCE

### 03.01 General Guidance

- a. Adequate Protection. The regulatory requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," Part 20, "Standards for Protection against Radiation," and Part 50, "Domestic Licensing of Production and Utilization Facilities," ensure that licensees provide adequate protection of occupational workers and members of the public from exposure to radiation and radioactive materials during the normal operation, including anticipated operational occurrences, of a nuclear power plant. In general, adequate protection from routine exposures is demonstrated by maintaining the resultant doses within the regulatory limits of 10 CFR Part 20.
- b. Applicable Performance Indicators. The inspections conducted under this procedure provide information on licensee performance in areas that are not measured by, or not fully measured by, the following performance indicators (PIs): unintended occupational radiation exposure, control of access to high (above 1 rem/hour) and very high radiation areas (Occupational Radiation Safety Cornerstone); and the release of radioactive materials in effluents that exceed a substantial fraction of the design criteria in Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as is Reasonably Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents," to 10 CFR Part 50 (Public Radiation Safety Cornerstone), as defined in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guidelines." In fulfilling the inspection requirements of the attachments, the inspector needs to exercise care to not spend time inspecting activities or characteristics that are already covered by a PI. However, inspections should periodically review applicable PI data, as appropriate, to verify their accuracy and completeness.

The PI in the Public Radiation Safety Cornerstone monitors the performance of the radiological effluent treatment and monitoring program. The PI is based on radiation dose resulting from effluent releases and does not evaluate the performance of the radiological environmental monitoring program or the processing, handling, storage, or transportation of solid radioactive materials.

An important means by which licensees maintain an appropriate level of safety is through an effective problem identification and resolution (PI&R) program to correct deficiencies involving human performance, equipment, programs, and procedures. The

inspection program verifies that the NRC's confidence in licensees' programs is still deserved and periodically verifies that the final actions on some of the lower level violations are proper. See Section 03.02.02 below for additional guidance on PI&R.

- c. Risk-Informed, Performance-Based Inspections. The NRC inspection program covers only small samples of licensee activities in any particular area. The principle of "smart sampling" is employed by the inspector in selecting items to review in each area, as opposed to a statistically based random selection. Smart sampling uses risk information and insights (gained from the licensee's quality assurance (QA) audits, independent evaluations, or operational experience) to focus on those aspects of plant operations and licensee activities that could pose the greatest risk to public health and safety. Performance-based inspections evaluate licensee performance by focusing on the outcomes of licensee programs (in terms of the risk of impacting the cornerstone objectives), as opposed to drawing conclusions on whether the licensee is in compliance with a regulation or standard irrespective of the risk impact.

### 03.02 Specific Guidance

- a. Inspection Planning. To the extent practical, inspections should be scheduled to coincide with plant evolutions and work activities that could have significant impact on the areas being inspected. The revised radiation protection inspection program will have one inspection procedure (IP71125.01) conducted during each refueling outage (RFO); therefore, each and every RFO should be scheduled for inspection in RRPS. The full IP 71125.01 hours are available for each RFO. For multi-unit sites that have more than one RFO in a short period i.e. (less than 12 months apart), inspectors may determine that the inspection opportunities associated with a subsequent RFO are of limited or no additional risk- or safety-significance. In such cases, inspectors should obtain Branch Chief approval not to conduct the inspection associated with the subsequent RFO. When Branch Chief approval is granted and the inspection is not used for a scheduled RFO, inspectors should mark the inspection complete using the guidance provided in the applicable inspection procedure. Similarly, certain inspection requirements are situationally dependent for a risk-informed sample to be available (e.g., special dosimetric situations, unplanned releases of radioactive materials). For such cases, discretion on the performance or reduction of the inspection is left to regional inspection staff supervision (i.e., Branch Chief), and appropriate Reactor Program System documentation guidance is provide in the applicable inspection procedure. The program office may be consulted as needed for either of the above cases. Additionally, the three triennial inspection procedures will be sequenced to inspect other areas of the radiation protection program nominally once each year. Conclusions about the licensee's performance should be based on inspector observation of risk-significant activities.
- b. PI&R. The Reactor Oversight Process is based on the presumption that licensees have mature, robust programs to self-identify and correct nonconformances and other program deficiencies throughout the conduct of their operations. The purpose of the reviews of P&IR programs within each baseline inspection procedure attachment is to confirm that the licensee is finding, documenting, and correcting (in a timely manner, commensurate with their safety significance) program deficiencies in each of the inspectable areas. The purpose of these PI&R reviews is not to document each nonconformance with a regulatory requirement that the licensee is tracking through its corrective action process.

Problem identification and resolution programs are an integral part of an effective QA program. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50 requires nuclear power plant licensees to establish a QA program, including measures to control the issuance of instructions, procedures, and drawings, including changes, which prescribe activities affecting the quality of safety-related structures, systems, and components (SSCs), and to inspect the conformance to these documents in the performance of these activities. To the extent that radiation protection activities pertain to safety-related SSCs (e.g., high-range effluent monitors, radwaste systems), they are within the scope of the Appendix B required program. However, several other areas within the radiation protection procedures are not explicitly required to be addressed in the Appendix B QA program. For example, license conditions in the plant technical specifications require QA programs for radiological effluent and environmental monitoring systems. In addition, 10 CFR Part 71, "Packaging and Transportation of Radioactive Material," Subpart H, "Quality Assurance," provides QA requirements applicable to the packaging of licensed radioactive materials for shipment. However, paragraph (f) of 10 CFR 71.101, "Quality Assurance Requirements," states that the QA requirements of 10 CFR Part 50, Appendix B, if applied to the transport of licensed radioactive material, are sufficient to meet the requirements of 10 CFR Part 71, Subpart H. For other aspects of the radiation protection program, Subpart B of 10 CFR Part 20 requires each licensee to develop, document, and implement a radiation protection program and to review the program content and implementation at least yearly, this requirement is clarified by Health Physics Position 118, where the NRC determined that licensees can conduct these reviews such that the entire program is reviewed over the course of three years. Most licensees include radiation protection procedures in the scope of their QA audits and PI&R programs as part of their QA program, as required by Appendix B to 10 CFR Part 50, in accordance with the guidance in Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)."

The inspector should use the guidance in IP 71152 and IMC 2515, Appendix A, when (1) verifying the effectiveness of corrective actions for issues identified that are within the scope of 10 CFR Part 50, Appendix B, and (2) determining that the PI&R program is sufficient to meet the radiation protection review and QA requirements of 10 CFR Parts 20, 50, and 71.

The inspector should determine if the following activities are being conducted in an effective and timely manner (e.g., commensurate with the importance to safety and risk significance), as part of the licensee's review of its Radiation Protection Program:

1. initial problem identification, characterization, and tracking
2. disposition of operability/reportability issues
3. evaluation of safety significance/risk and priority for resolution
4. identification of repetitive problems
5. identification of root and contributing causes
6. identification and implementation of effective corrective actions
7. resolution of non-cited violations tracked in corrective action system(s)
8. implementation/consideration of risk-significant operational experience feedback

- c. Third-Party Reviews. The review of third-party audits is intended to gain insights into the licensee's performance in a particular area for the purposes of inspection planning and smart sampling. This inspection requirement does not include a detailed inspection or follow-up of the licensee's corrective actions resulting from the third-party review findings. See Section 13.01, "Treatment of Third Party Reviews," of IMC 0611, "Power Reactor Inspection Reports," for more specific guidance on how to conduct and document detailed NRC review of third-party evaluations, accreditation reports, findings, recommendations, and corrective actions.

END

Attachment 1: Revision History for IP 71125

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)
	ML26154A192 06/10/26 CN 26-027	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.	N/A	N/A