
INSPECTION MANUAL CHAPTER 2515 APPENDIX G

BASELINE INSPECTION GUIDANCE FOR POWER REACTORS PREPARING FOR TRANSITION TO DECOMMISSIONING PHASE

2515G-01 PURPOSE

To provide guidance to the staff for inspecting nuclear power licensees preparing to transition from an operating power reactor to a decommissioning reactor facility.

2515G-02 OBJECTIVES

In addition to supporting Inspection Manual Chapter (IMC) 2561 “Decommissioning Power Reactor Inspection Program,” this appendix incorporates lessons learned from nuclear power plants that have permanently ceased operation (e.g., Vermont Yankee (VY), Kewaunee, Crystal River (CR), and San Onofre Nuclear Generating Station (SONGS)) and are now being inspected and assessed under IMC 2561. This guidance recommends areas for increased, reduced, or continued inspection emphasis, including potential sample reductions where appropriate, and identifies baseline inspection program team inspection areas, scheduling, hours, and corresponding decommissioning IPs, as applicable. Inspection planning should appropriately credit Reactor Oversight Process (ROP) inspections performed during the shutdown year, consistent with IMC 2561.

2515G-03 APPLICABILITY

For a site that has submitted a certification of permanent cessation of operations in accordance with 10 CFR 50.82(a)(1)(i), and until the unit is certified permanently defueled, site-specific inspection effort remains based on the operating reactor inspection program in IMC 2515. This appendix provides additional guidance for inspectors during that transition period. After the licensee certifies permanent fuel removal from the reactor vessel, IMC 2561 is implemented for the remainder of the decommissioning process, and oversight of the licensee is no longer under the ROP. The licensee is informed of the transition in oversight programs as specified in IMC 0305, “Operating Reactor Assessment Program.”

2515G-04 DEFINITIONS

- 04.01 Annually (A). The inspection effort should be performed once each calendar year.
- 04.02 Biennially (B). The inspection effort should be performed at least once every 2 years. It is not intended for this frequency to be based on a rolling 2-year cycle.
- 04.03 Decommissioning. To remove a facility or site safely from service and reduce residual radioactivity to a level that permits (1) release of the property for unrestricted use and termination of the license, or (2) release of the property under restricted conditions and termination of the license.

- 04.04 Post Operation Transition Phase. The interval between final reactor shutdown and the establishment of a safe and stable permanently shutdown and defueled condition, based on the completion of regulatory and safety milestones. The applicable NRR/CNRI interface guidance, currently NRR Office Instruction COM-101, "NRR Interfaces with NMSS," and the Office of Nuclear Material Safety and Safeguards (NMSS) Policy and Procedure 5-1 provide direction for NRC activities and funding requirements during the operation-to-decommissioning transition.

During this phase, the licensee establishes safe shutdown conditions and places the facility in a configuration acceptable for decommissioning, consistent with the decommissioning strategy chosen by the licensee. In addition, during this transition phase, the licensee implements policies, programs, and procedures to reflect the permanently shutdown and defueled condition of the facility. These changes may include physical modifications to the plant, such as alterations to the spent fuel pool that could modify the facility security plan.

- 04.05 Power Reactor. A nuclear facility having a reactor licensed under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," for power generation which may or may not have generated electrical power. The power reactor is also considered to include the land area within the licensed boundaries of the site, as described in the NRC operating license.
- 04.06 Quarterly (Q). The inspection effort should be performed four times each year; once each calendar quarter.
- 04.07 Team Inspection. Team inspections are defined as those inspections conducted by more than one inspector. Often, at least one of the inspectors is included on the team because of a specialty in a particular field and may come from a different region or office. Individuals that are observing the inspection for training purposes do not count toward the total number of inspectors.
- 04.08 Triennial (T). The inspection effort should be performed at least once every 3 years. It is not intended for this frequency to be based on a rolling 3-year cycle.

2515G-05 RESPONSIBILITIES AND AUTHORITIES

- 05.01 Director, Office of the Chief Nuclear Reactor Inspector. Provides overall direction for the transition of power reactors from operation to decommissioning and for the transfer of the facility from the ROP to the Decommissioning Power Reactor Inspection Program, including associated project management responsibilities. NRR Office Procedure COM-101, "NRR Interfaces with NMSS," or applicable successor CNRI guidance, provides details on the project management transfer and the associated transfer of resources needed to support project management and regional inspection responsibilities.
- 05.02 Chief, Reactor Inspection Branch (CNRI). Provides overall agency leadership for the Reactor Oversight Program and concurs on changes to this manual chapter that impact or potentially affect the inspection of power reactors in the Post-Operation Transition Phase.
- 05.03 Director, Office of Nuclear Material Safety and Safeguards. Provides overall direction for the decommissioning power reactor project management and inspection programs, for

power reactors in decommissioning status, until the license is terminated. NMSS Policy and Procedure 5-1 provides details on the project management transfer to NMSS, as well as the necessary resource transfer for both NMSS project management and appropriate regional inspection program responsibilities.

- 05.04 Chief, Reactor Decommissioning Branch (NMSS). Coordinates, develops, and implements the decommissioning power reactor project management program, and provides programmatic oversight of the regional inspection requirements and policies.
- 05.05 Regional Administrator and Regional Management. Provides direction for implementation of the inspection program for decommissioning power reactors in the regional offices, in concert with NRC Headquarters. Ensures that the regional office staff includes an adequate number of inspectors in various disciplines to carry out the inspection program as assigned and described in this manual chapter and within budget limitations. Determines the need for the temporary assignment of an inspector at a facility that has permanently shutdown and the duration and scope of this inspection coverage. Applies inspection resources, as necessary, to deal with issues that arise at specific facilities undergoing decommissioning.

Headquarters and Regional Division Directors responsible for the implementation of the Reactor Oversight Process Baseline Inspection Program and the Decommissioning Power Reactor Inspection Program should determine the appropriate timing for transfer of the reactor inspection program from IMC 2515 to IMC 2561. The transfer should be documented in a letter between the appropriate Division Directors, including a statement of the formal transfer date, in order to ensure that the necessary resources, including travel funds, are allocated appropriately between the divisions to support performance of the required inspection activities.

- 05.06 Regional Manager (First line supervisor to inspectors). Directs and implements the decommissioning power reactor inspection program in the region in accordance with this manual chapter and coordinates with the appropriate Resident Inspectors, Headquarters, and regional managers, as applicable, to implement this manual chapter.

2515G-06 REQUIREMENTS

This appendix only provides guidance and is not a program requirement.

2515G-07 REFERENCES

COM-101, NRR Interfaces with NMSS

IMC 2515, "Light-Water Reactor Inspection Program—Operations Phase"

IMC 2561, "Decommissioning Power Reactor Inspection Program"

END

**Attachment 1: Suggested Increase in Inspection Emphasis for
Selected Areas During Transition to Decommissioning**

IP Number	Title	Comments/Basis for Adjustment	Associated IMC 2561 Decommissioning Inspection Procedure
71111.04	Equipment Alignment	Attrition in staffing levels and reduction of craft skill can affect equipment alignment and configuration control. As the plant approaches permanent shutdown, increases in temporary and permanent modifications may warrant additional inspection attention to ensure operators can safely implement and manage changed configurations. For example, at SONGS, non-licensed operators (NLO) were eliminated, and licensed operators assumed the role of the NLO outside the control room (e.g. equipment manipulations, tagouts and log keeping). Inspectors should verify that changes in operator staffing and responsibilities do not adversely affect equipment alignment and configuration control.	IP 60801, "Decommissioning Spent Fuel Pool Maintenance, Surveillance, and Safety" IP 71801, "Decommissioning Implementation and Status"
71111.11	Licensed Operator Requalification Program and Licensed Operator Performance	As staffing challenges arise during transition to decommissioning, inspectors should consider whether changes in licensed operator staffing, supervisory depth, or requalification focus could affect operator performance during risk-significant or infrequently performed evolutions.	IP 41500, "Training and Qualification Effectiveness" (reference only) IP 71801, "Decommissioning Implementation and Status"
71111.15	Operability Determinations and Functionality Assessments	As the plant approaches permanent shutdown, additional operability reviews may be warranted for deferred maintenance, skipped surveillances, degraded conditions accepted as-is, and modifications that could affect operability and functionality. If engineering staffing declines, the quality of engineering input for operability evaluations could degrade.	IP 37801, "Decommissioning Safety Reviews, Design Changes, and Modifications"
71111.24	Testing and Maintenance of Equipment Important to Risk	Attrition in staffing levels and reduction of craft skill can adversely affect testing and maintenance activities important to spent fuel pool safety and other safety-significant systems during the transition to decommissioning. Inspectors should also consider whether changing licensed operator roles, supervisory oversight, and operator	IP 60801, "Decommissioning Spent Fuel Pool Maintenance, Surveillance, and Safety"

IP Number	Title	Comments/Basis for Adjustment	Associated IMC 2561 Decommissioning Inspection Procedure
		performance during risk-significant or infrequently performed evolutions could affect the conduct of surveillance testing, post-maintenance testing, or other complex plant activities, including command and control, communications, procedural adherence, timely control manipulations, and coordination between the control room and field operators.	

Attachment 2: Suggested Reduction in Inspection Emphasis for
Selected Areas During Transition to Decommissioning

IP Number	Title	Comments	Decommissioning Inspection Procedure as Applicable
71111.04	Equipment Alignment	Internal flood protection and heat exchanger and heat sink performance attributes may warrant reduced inspection emphasis during transition to decommissioning, as structures, systems, and components (SSCs) taken out of service no longer pose the same operating risk significance. Where heat exchanger performance remains relevant, inspectors should consider spent fuel pool heat exchangers or containment spray heat exchangers, as applicable. Submerged safety-related cables associated with SSCs that will be taken out of service will not pose significant risk.	IP 60801, "Decommissioning Spent Fuel Pool Maintenance, Surveillance, and Safety"
71111.24	Testing and Maintenance of Equipment Important to Risk	During transition to decommissioning, quality control, aging management, and post-maintenance testing inspection emphasis may be reduced and focused on equipment issues or systems important to spent fuel safety. As maintenance and testing activities decline, remaining inspection effort should focus, as applicable, on deferred preventive maintenance, deferred surveillance testing, increasing corrective maintenance backlogs, and post-maintenance testing for equipment important to spent fuel safety.	IP 60801, "Decommissioning Spent Fuel Pool Maintenance, Surveillance, and Safety" IP 71801, "Decommissioning Implementation and Status"
71111.13	Maintenance Risk Assessments and Emergent Work Control	As the plant transitions to decommissioning, reductions in preventive maintenance and planned work windows may reduce the number of planned maintenance activities for which risk assessment and management actions provide significant inspection value. Emergent work activities may remain an area of inspection focus, as applicable.	IP 71801, "Decommissioning Implementation and Status"
71114.06	Drill Evaluation	As the plant transitions to decommissioning, drill evaluation inspection emphasis may be reduced, with greater focus on emergency preparedness training, drill critique effectiveness, and emergency response staffing, as applicable.	

Attachment 3: Suggested Areas for Continued Inspection Emphasis
During Transition to Decommissioning

IP Number	Title	Comments	Decommissioning Inspection Procedure as Applicable
71111.01	Adverse Weather Protection	Maintain inspection emphasis on seasonal extreme weather and impending severe weather conditions that could challenge ultimate heat sink availability, offsite power, alternate AC power, flood protection features, and operator readiness.	IP 71801, "Decommissioning Implementation and Status"
71111.05	Fire Protection	Maintain inspection emphasis on fire protection program implementation, including fire area readiness, suppression and detection features, passive fire barriers, compensatory measures, and fire brigade training and drill performance.	IP 64704, "Decommissioning Fire Protection Program"
71111.20	Refueling and Other Outage Activities	Maintain inspection emphasis on spent fuel pool cooling, refueling controls, foreign material exclusion, decay heat removal, and shutdown configuration risk during outage activities.	IP 60801, "Decommissioning Spent Fuel Pool Maintenance, Surveillance, and Safety"
71152	Problem Identification and Resolution (PI&R)	Consider focus on maintenance backlog and preventive maintenance history, as staffing reductions, changing work priorities, and transition-related deferrals may affect timely issue resolution. Inspectors should consider whether the corrective action program is identifying adverse trends, prioritizing degraded conditions, and implementing corrective actions commensurate with their safety significance. Inspectors may also consider periodic verification of reported performance indicator data, as an annual sample, when questions, discrepancies, or other indications of potential inaccuracy arise regarding information submitted by the licensee.	IP 71801, "Decommissioning Implementation and Status"
71153	Follow-up of Events and Notices of Enforcement Discretion	Maintain inspection emphasis on risk-significant events, degraded conditions, reportable issues, and personnel performance that may reveal adverse trends during transition to decommissioning.	No direct IMC 2561 counterpart identified; IP 71801 may provide partial coverage, as applicable.
IMC 2515, App D	Plant Status	Focus on SSCs necessary for the safe storage of spent fuel, including those related to security, radiation protection, and emergency preparedness. Periodically discuss with licensee representatives the status of decommissioning activities, problems encountered, and performance insights. Plant status activities may also include awareness of security-related conditions and safety/security interface	IP 71801, "Decommissioning Implementation and Status"

IP Number	Title	Comments	Decommissioning Inspection Procedure as Applicable
		issues; transition to IP 71130.15, as appropriate, for more in-depth reviews of security operations.	

Attachment 4: Baseline Inspection Program Team Inspections

In addition to the inspection procedures that resident inspectors complete, baseline inspections should continue to be conducted by the regional inspectors such as engineering, radiation protection, emergency preparedness, operator licensing, and security with focus including but not limited to the following:

- Samples of licensee evaluation and response to License Amendments, Generic Letters, Bulletins and Information Notices after shutdown announcement.
- Potential degradation to radiological controls including increase in dose and area of contamination on site.
- Evaluation of In-Service Inspection deferrals.
- Security Inspection Procedures (IPs) remain as scheduled until all spent nuclear fuel is removed.
- Availability of emergency facilities, staffing and operability of emergency sirens
- For IP 71111.21T, "Engineering Safety Performance Inspection," if the target date for permanent shutdown is more than 3 years in the future, the next inspection should occur as normally scheduled within the current triennial period. If the target date for permanent shutdown is less than 3 years in the future, the program office should consider whether a reduced-scope inspection focused on current engineering activities most relevant to the transition to decommissioning, or whether cancellation is more appropriate. Sample selection should emphasize risk-significant current engineering activities, including design changes, tests and experiments, modifications, and other transition-related engineering work, as applicable. Examples may include the standby fuel pool cooling system (pump, pump motor, and heat exchanger), the normal fuel pool cooling system isolation valve, and review of corrective action associated with NRC Information Notice 2009-26, "Degraded Neutron Absorber in the Spent Fuel Pool," and NRC Information Notice 2011-03, "Non-conservative Criticality Safety Analyses for Fuel."
- A triennial Problem Identification and Resolution (PI&R) team Inspection, if it falls in the last year of the shutdown cycle, may be performed at reduced scope. Inspection focus should emphasize the licensee's corrective action program and significant transition-related issues. Resident inspectors may continue to evaluate emerging trends in issue identification and timely correction through routine inspection activities.
- Consideration should be given to other baseline team inspections performed on a biennial and triennial basis for performance/scope increase or decrease as mentioned in the above engineering inspection and PI&R discussions.

IP Number	Title	IP Scheduled During the Last Year of Operation	Total Inspection Hours	Decommissioning Inspection Procedure as Applicable
71114	Reactor Safety--Emergency Preparedness	Continue as scheduled until certification of permanent removal of fuel.	IAW IP	IPs 82401 and 82501 may be used as additional guidance during transition.
71130	Security	Continue as scheduled until certification of permanent removal of fuel.	IAW IP	Not part of IMC 2561; security inspections are implemented separately. See IP 81200, "Security."
71125	Radiation Safety--Public and Occupational	Continue as scheduled until certification of permanent removal of fuel.	IAW IP	IPs 83750, 84750, 86750 may be used as additional guidance during transition.
71152	Problem Identification and Resolution (PI&R)	Recommend reducing scope.	70-81 hours	
71111.21T	Engineering Safety Performance Inspection	Not recommended, or recommend reduced scope based on current engineering activities most relevant to the transition to decommissioning.	IAW IP	IP 37700, "Design Changes and Modifications" IP 37801, "Decommissioning Safety Reviews, Design Changes, and Modifications" IP 64704, "Decommissioning Fire Protection Program"
71111.08	Inservice Inspection Activities	Not recommended.	IAW IP	
71111.11	Licensed Operator Requalification Program and Licensed Operator Performance	Recommend in the first two quarters to ensure adequate staffing and training.	IAW IP	
81823	Material Control and Accounting	If IP 81823 is performed in the last year of the transition cycle, use the guidance of IP 85103 from IMC 2561.	IAW IP	IP 85103, "Material Control and Accounting at Decommissioning Nuclear Power Reactors"

Attachment 5: Revision History for IMC 2515 Appendix G

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)
	ML15183A264 02/01/16 CN 16-004	Initial issuance. Researched commitments for 4 years and found none. Created to provide guidance to the regional staff for nuclear power licensees preparing to transition from an operating power reactor to a decommissioning reactor facility		ML15188A020
	ML25037A267 09/30/26 CN 26-045	Completed 5-year review and updated the appendix to align with current baseline inspection procedures and IMC 2561 guidance for transition to decommissioning. Revised definitions, responsibilities, procedure references, and attachment guidance to reflect the current inspection program structure.		ML26162A386