
INSPECTION PROCEDURE 40801

PROBLEM IDENTIFICATION AND RESOLUTION AT PERMANENTLY SHUTDOWN REACTORS

Effective Date: 01/01/2021

PROGRAM APPLICABILITY: IMC 2561, Appendix A

40801-01 INSPECTION OBJECTIVES

01.01 To evaluate the effectiveness of licensee controls in identifying, resolving, and correcting issues in accordance with The U.S. Nuclear Regulatory Commission's (NRC) approved quality assurance (QA) program and 10 CFR Part 50, Appendix B, Criterion XVI.

01.02 To determine whether the audits and assessments are conducted in accordance with the requirements of the NRC-approved QA program and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix B.

01.03 To confirm that the licensee has established, implemented, and performs management reviews of the safety conscious work environment.

40801-02 INSPECTION REQUIREMENTS

02.01 Assess the licensee's effectiveness at reasonably preventing problems and promptly detecting and correcting issues of concerns, conditions adverse to quality, and non-conformances. This review should include attendance at a licensee's corrective action review meeting, or equivalent. Review all items, if practicable, entered in the Corrective Action Program (CAP) since the last inspection. Select 3-5 examples, based on risk insights, for additional follow-up.

02.02 Review all entries that are classified as significant conditions adverse to quality, (SCAQ), all items that were entered to address previous non-compliance issues, and all Licensee Event Reports.

02.03 Verify that the licensee is identifying and placing potential 10 CFR Part 21, "Reporting of Defects and Non-Compliance Issues," into the CAP and appropriately evaluating them.

02.04 Review all audits and assessments, as applicable, that evaluate the licensee's CAP and QA program. This includes the audits performed to demonstrate compliance with 10 CFR Part 50 Appendix B, Criterion XVIII. Verify that the audits are being performed consistent with the schedule outlined in the QA program plan. Determine whether the licensee's conclusions in the audits and assessments are reported to licensee management and consistent with the issues selected above. Verify that deficiencies identified are entered into the CAP and the appropriate actions are followed.

02.05 Evaluate the licensee's safety culture based on insights gained from performing inspection requirements 02.01 and 02.02, above. Assess the licensee's Safety Conscious Work Environment in order to identify any indications of reluctance to report safety issues by licensee personnel. Review all licensee-initiated safety culture assessments and all issues that pose challenges to the free flow of information for adequate resolution.

40801-03 INSPECTION GUIDANCE

General Guidance

The primary objective of this Inspection Procedure (IP) is to assure that the licensee's self-assessment, auditing, and CAP are effective at identifying, resolving, and preventing problems. The term "problem" or "occurrence" in this procedure is synonymous with conditions adverse to quality (as described in 10 CFR Part 50, Appendix B), or any other condition or defect that may be adverse to public health and safety or the environment during the decommissioning process. This IP applies to all states of decommissioning until license termination. Additional guidance can be found in IP 71152, "Problem Identification and Resolution." In accordance with 10 CFR Part 50, Appendix B, Criterion XVI, licensees must establish measures to assure that conditions adverse to quality are promptly identified and corrected. For significant conditions adverse to quality, corrective actions must also preclude repetition. Not all actions necessarily need to be handled within the licensee's CAP under 10 CFR Part 50, Appendix B, Criterion XVI. It may be more appropriate for some issues that are not conditions adverse to quality to be tracked to resolution through an alternate licensee program such as an employee concerns program.

The risks at a decommissioning facility change and are reduced as the facility transitions from operations to decommissioning. Throughout all phases of decommissioning, inspectors should identify what conditions or actions contribute most to the onsite risks and ensure that the licensee is effectively managing these risks by identifying, resolving, and preventing problems. For example, while fuel is maintained in a spent fuel pool, the Structures, Systems, and Components (SSCs) important to the safe storage of spent fuel will be important to managing the risks of spent fuel. Once all fuel has been removed from the spent fuel pool, the importance of these SSCs diminishes and inspectors should focus their inspection efforts on verifying whether problems are adequately identified, resolved, and prevented in other risk significant areas. Other risk significant areas might include the removal of major radioactive components as defined in 10 CFR 50.2, the conduct of site remediation, or Final Status Surveys performed in support of license termination. Inspectors should select inspection items using a performance based, risk-informed approach, while also considering variety.

If possible, the inspector should obtain and review the licensee's CAP procedures, QA Program Description (QAPD) or QA Topical Report (QATR), QA procedures, the QA audit plans, audit reports, and self-assessment reports prior to the start of the inspection. Procedures should only be reviewed to provide the inspectors with sufficient knowledge of the licensee's programs and processes, as necessary, to conduct an effective and efficient inspection. Audits should be used to assist inspectors in identifying potential problems or gaps in other risk-significant areas. Additionally, the inspector should review previous NRC inspection reports to ascertain the scope of previous reviews and documented licensee performance.

Specific Guidance

03.01 This requirement assesses whether the licensee has implemented adequate measures

to identify and resolve issues consistent with 10 CFR Part 50 Appendix B, Criterion XVI. Inspectors should perform a holistic review of the licensee's performance and facility conditions to ensure issues are being identified and entered into the CAP at an appropriate threshold. Licensee management should encourage identification and be engaged with the resolution of conditions adverse to quality. Furthermore, workers should be encouraged to raise concerns and utilize the CAP to document and resolve potential conditions adverse to quality. Additionally, the licensee should be looking for trends in the CAP that might be indicative of an underlying concern.

The intent of screening a large amount of CAP entries is for inspectors to be alert to conditions such as repetitive, long-term, or latent equipment failures that might warrant additional follow-up. There are many ways an inspector can efficiently screen CAP entries, including but not limited to scanning the entries themselves or obtaining a list of titles for all entries. Inspectors must be alert for adverse performance trends and risk-significant or repetitive equipment failures. During the initial screening, the inspector should select the most risk-significant entries for further review. Additional consideration should be given to ensure a review across departments is performed to determine whether performance is declining within a specific work group. The inspector should note that each inspection procedure includes a problem identification and resolution section intended to review recent topic related issues. This inspection procedure is intended to be an overall look at the program with selected deep dives into selected issues. The inspector should consider whether issues have already been reviewed and consider evaluation for trends, as appropriate.

In addition to reviewing CAP entries, inspectors should attend licensee CAP meetings, management review meetings, and conduct interviews as appropriate. Consideration should also be given to meeting with the licensee's CAP manager to aid in understanding the licensee's problem identification and resolution process. To assure that issues adverse to quality are promptly identified, the licensee should also consider the applicability of industry operating experience to their own facility. As such, inspectors should verify whether the licensee is incorporating industry operating experience.

For the 3-5 examples selected for additional follow-up, determine the licensee's effectiveness at identifying and resolving problems, specifically:

- Verify that the issues were screened and assigned a significance consistent with the licensee's procedures.
- Verify that the corrective actions are commensurate with the significance of the issue and implemented in a timely manner.
- Verify that management has provided the proper oversight of the original issue along with its disposition.

03.02 During the assessment of the licensee's corrective action program, the inspector should use recent examples of corrective action activities to verify that criteria for determining a significant condition adverse to quality are appropriately established. Specifically, the licensee's CAP should evaluate: (1) the chain of events; (2) cause(s) for significant conditions adverse to quality or safety; (3) the operability and/or functionality of affected components or systems; (4) reportability; (5) similar situations and generic implications; and (6) appropriate corrective actions to prevent recurrence.

Root causes are those items that if corrected would have, in themselves, prevented the problem from occurring. Therefore, a root cause must be under the control of the licensee and must be

the fundamental reason(s) for an occurrence. Additionally, the effectiveness of corrective actions should not to be judged solely on the lack of recurrence of an issue but on the absence of the reasons why the original occurrence happened. In the assessment of a particular occurrence, the inspector should focus on the what, when, where, how, and why, with a secondary consideration devoted to who. In all cases, the inspector should consider the scope of corrective actions and judge whether the applicable 10 CFR Part 50, Appendix B, QA criteria were satisfied.

Should the inspector identify any weaknesses in the licensee's root cause evaluations or implementation of corrective actions, these programmatic problems should be considered for follow-up.

03.03 Inspectors should review and be aware of 10 CFR Part 21 notifications applicable to decommissioning and verify that the issues have been entered into the licensee's CAP for evaluation and disposition. These notifications are available on the NRC's public Web site. The inspectors should also confirm on a sampling basis that defects or non-conformances that the licensee identifies are evaluated in accordance with 10 CFR Part 21, "Reporting of Defects and Noncompliance."

03.04 The licensee's QA program will be described in the QAPD or QATR, as applicable. These documents describe in detail how the facility will satisfy 10 CFR Part 50 Appendix B requirements and may describe additional commitments, part 21 reporting guidance, non-safety-related quality controls, and details of independent reviews. Inspectors should review these program documents to the extent that they become familiar with what procedures and structures, systems, and components are relevant to the QA program at the decommissioned facility.

The level of management review and independence for audits and self-assessments is normally described in the Technical Specifications (TSs), License Termination Plan (LTP), QA Plan, or associated procedures. Audits and assessments that are performed to address specific regulatory requirements, such as those required per 10 CFR 50.48(f)(2), "Fire Protection," or 10 CFR 20.1101, "Radiation Protection Programs," should be reviewed when performing the applicable inspection procedure that assesses these programs and not this procedure. Other audits and assessments should be sampled for review while considering variety.

The inspector should verify that the applicable procedures specify the level of management review and independence necessary for each type of audit or self-assessment, and that the QA organization has access to upper licensee management, as well as the authority to effectively use that access. The extent to which the QA organization constructively meets with facility management is a key indicator of licensee effectiveness. If possible, the inspector should observe a meeting between the QA organization and licensee or contractor (i.e., facility) management, determine whether these meetings take place on a routine or as needed basis, and review the minutes from a sample of previous meetings to verify that the QA organization is interacting with facility management to an extent commensurate with the decommissioning activities underway at the site. If contractors are onsite performing work that falls within the scope of the licensee's QA program, verify that the contractors are using the licensee's QA program or have their own QA program that the licensee approved. In all cases, contractors must have a mechanism that permits them to raise safety concerns to licensee management and enter issues of concern into the licensee's CAP. If applicable, inspectors should assess the effectiveness of a contractor's ability to enter issues into the licensee's CAP.

NRC regulations and American National Standards Institute (ANSI) standards typically dictate that persons performing audits cannot audit their own work. Independence represents an opportunity to communicate different safety perspectives, engage in critical evaluation, segregate biases, and benefit from industry lessons learned. This is not to say that experience and expertise in the area being audited are not important, only that a licensee is expected to assign auditors with sufficient independence to perform credible reviews. The inspector should verify that the applicable QA procedures specify an adequate level of independence and qualification requirements for auditors in various areas. In addition, the inspector should determine whether the auditors have met the requirements for qualification and independence expected by the associated procedures.

Typical performance elements that indicate appropriate independence and effectiveness of QA and/or management reviews may include: (1) the conduct of third party independent reviews and audits; (2) expert or recognized technical assistance; (3) complement and diversity of the audit team; (4) scope and depth of the audit; (5) complexity, detail, or quality of the findings, conclusions, and recommendations; (6) timely resolution and closure of audit issues; (7) application of audit recommendations to other functional areas; and (8) identification of findings outside the primary focus of the audit. The inspector should use this information to determine whether the licensee's program for the identification, resolution, and prevention of issues that degrade site safety or impact the quality of decommissioning activities is being implemented in accordance with the associated procedures and to a level commensurate with decommissioning safety. Finally, the inspector should verify that QA findings, conclusions, and recommendations receive appropriate treatment by licensee management.

Upon permanent cessation of operations, the licensee may either choose to maintain all 10 CFR Part 50 operational QA audits, or request exemptions or license amendments to limit its required audits to areas of particular safety importance to decommissioning. In the former case, licensees have managed its audit activities by directing resources and effort towards the functional areas deemed important for the safe conduct of decommissioning, such as design control, safety evaluations, radiation protection, and effluent controls, whereas less effort is applied to "operational" audit areas, such as control room operator training, in-service testing, etc.

The inspector should evaluate the licensee's audit approach to ensure that the program is being implemented in accordance with the remaining regulatory, TS, and procedural requirements applicable to the licensee. The inspector should also review the licensee's overall tracking and handling of audit findings by the licensee and/or contractor to determine whether the finding resolutions are timely and focused on correcting the cause(s) of the identified deficiency. In addition, inspectors should be aware of third-party involvement in the licensee's problem identification and resolution process, and determine whether third-party findings, conclusions, and recommendations receive appropriate treatment by the licensee. It is generally considered a licensee strength when technically qualified, third party, independent auditors are utilized. Finally, the inspector should interview selected individuals involved with the QA organization to discuss the effectiveness of their efforts, the responsiveness of facility management and staff to issues raised under the problem identification and resolution process, and any anomalies or trends identified by the QA program.

The conduct of self-assessments is a valuable indicator of licensee performance. The inspector should evaluate the licensee's self-assessment program and determine to what extent management is supportive of self-assessments, makes self-assessments and the resolution of findings a priority and develops an atmosphere that encourages individual and functional area

improvement.

03.05 During this inspection, it is expected that discussions or interviews will be held with both licensee management and staff, across various work groups, to assess safety culture. It is not intended that inspectors conduct formal interviews solely for the purpose of assessing the work environment; rather, inspectors may use discussions with individual members of the licensee concerning other attributes of the inspection. The number of interviews performed should be commensurate with the potential concerns identified during planning and conduct of the inspection. Further guidance for these interviews can be found in IP 71152, "Problem Identification and Resolution," Appendix A, "Guidance for Gathering SCWE and PI&R Insights." Specifically, Appendix A to IP 71152 contains a list of questions that can be used when discussing problem identification and resolution issues with licensee personnel to help assess whether impediments exist to a Safety Conscious Work Environment (SCWE).

The inspector should verify that an appropriate process exists for the resolution of conditions brought to management's attention, which may lead to or cause a violation of NRC regulations or unnecessary exposure to radiation. The handling of employee and/or safety concerns by both a licensee and their employees is described, in part, in 10 CFR 19.12(a)(4), "Instruction to workers;" and, 10 CFR 19.20, "Employee protection." Inspectors should consider meeting with the licensee's Employee Concerns Program manager to understand what training is provided to employees regarding these regulatory requirements and the licensee's process for addressing employee concerns. The Employee Concerns Program manager will also have knowledge of current concerns and trends associated with safety culture. These insights may be helpful for an inspector to be aware of to identify the types of questions to ask, and who to interview during the inspection.

Employees should feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation. Although the licensee may be implementing an employee concerns or similar program regarding the identification of safety issues, the possibility of existing underlying factors that would produce a "chilling" effect or reluctance to report such issues could exist, and inspectors should be alert for such indications. Such factors could include but not be limited to direct retaliation, inadequate staffing that results in excessive overtime, an unwillingness to raise issues that might result in further increases to an already high workload, or inadequate corrective actions for previously identified issues causing personnel to be reluctant to identify additional related issues.

If inspectors become aware of (1) instances of employees being discouraged from raising safety or regulatory issues within the licensee's or contractor's organization or to the NRC, (2) a "chilling" effect, or (3) other general reluctance of employees to raise safety or regulatory issues unrelated to a specific event or incident, they should refer to IP 93100, "Safety Conscious Work Environment Issue Follow-up," and consult with regional management to determine appropriate follow-up actions.

40801-04 RESOURCE ESTIMATE

Note that for all decommissioning inspection activities, the frequency of performance, level of effort needed, and specific inspection requirements to be evaluated and verified vary based on the stage of decommissioning at the facility, the scope of licensee activities, and the overall decommissioning strategy chosen for the plant (i.e., SAFSTOR or DECON). Inspection Manual Chapter (IMC) 2561 contains a discussion of the expected inspection frequency and resource

estimates during each phase of decommissioning and should be used when planning resources to conduct this inspection.

40801-05 COMPLETION STATUS

Inspection findings, open items, follow-up items, and conclusions shall be documented in accordance with IMC 0610 and other relevant regional or headquarter instructions. Inspections resulting from allegations will be documented and dispositioned in accordance with Management Directive 8.8.

40801-06 REFERENCES

ANSI N18.1-1971, "Selection and Training of Personnel for Nuclear Power Plant Personnel"

ANSI N18.7-1976, "Quality Assurance for the Operational Phase of Nuclear Power Plants"

ANSI N45.2-1977, "Quality Assurance Program Requirements for Nuclear Facilities"

ANSI/ANS 3.2-1982, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants"

Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operational)"

END

Attachment 1

Revision History for IP 40801

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)
N/A	8/11/97	Original issuance.	N/A	N/A
N/A	ML20258A075 10/05/20 CN 20-046	Major Revision. Revised to include feedback and lessons learned from inspectors and also for format and editorial changes. The content of this procedure was updated to focus on the inspector's efforts on risk informing the inspection.	None	ML20258A076