INSPECTION PROCEDURE 75001

INSPECTION OF MANUFACTURING AND CONSTRUCTION QUALITY FOR ADVANCED POWER REACTOR STRUCTURES, SYSTEMS, AND COMPONENTS

Effective Date: April 1, 2026

PROGRAM APPLICABILITY: IMC 2573

75001-01 INSPECTION OBJECTIVES

This inspection procedure (IP) and the associated attachments provide guidance for implementing the advanced reactor construction oversight program's (ARCOP) construction inspection program (ACIP) in the "Quality of Reactor Plant Construction" strategic performance area. The overall inspection philosophy is described in Inspection Manual Chapters (IMC) 2573, "Inspection of the Advanced Power Reactor 'Quality of Reactor Plant Construction' Strategic Performance Area"; IMC 2574, "Inspection of the 'Operational Readiness" Strategic Performance Area of the Advanced Reactor Construction Oversight Program (ARCOP)'; and IMC 2570, "Advanced Reactor Construction Oversight Program (ARCOP) Basis Document."

The purpose of the ACIP is to provide the staff with the information necessary to make a reasonable assurance determination that activities for the design, manufacture, fabrication, construction, installation, qualification, and testing of structures, systems, and components (SSCs) in each inspection area (i.e., Inspection Scoping and Planning Matrix column) are performed with quality.

This procedure and its attachments are applicable to advanced reactors licensed under 10 CFR Part 50, Part 52, and the future Part 53. Due to the variety of reactor technologies and licensing pathways available to advanced power reactors, not all IPs or IP sections will be required to be performed to complete the ACIP for a given advanced reactor construction project. applicable to each reactor design.

75001-02 INSPECTION REQUIREMENTS

02.01 During each inspection per Section 02.02 below, perform a "Vertical Slice" inspection of Quality Assurance. Appendix A of this procedure provides guidance for inspection of the quality assurance (QA) aspects of SSC construction and is to be used in conjunction with the applicable inspection area IP 75001 attachment(s) listed in Table 1.

02.02 Perform inspections per the project-specific scoping matrix using the IP(s) listed in Table 1 (i.e., IP 75001.XX). Determine if activities associated with the design, fabrication, manufacture, construction, installation, and testing of safety-related and non-safety-related, safety significant structures, systems, and components (SSCs) are being completed in accordance with applicable technical, quality, and regulatory requirements.

02.03 Verify the inspections, tests, and analysis (ITA) are performed and that the acceptance criteria (AC) in the combined license (COL) are met. (Only applicable for construction under a COL)

02.04 Inspect implementation of the operational program activities as specified in the IP 75001 attachments (i.e., 75001.XX). These inspection activities include operational programs related to Pre-Service Inspection (PSI); Reliability and Integrity Management Program (RIMP); Pre-Service Testing (PST); Reactor Vessel Material Surveillance, Containment Leakage Rate, Comprehensive Vibration Assessment Program; and the Environmental, Seismic, and Functional Qualification of SSCs.

75001-03 INSPECTION GUIDANCE

General Guidance

This IP is applicable to the design, manufacture, and construction of all advanced commercial nuclear reactors, including SMRs and microreactors incorporating both light water reactor (LWR) and non-LWR technologies, and large LWR or non-LWRs with enhanced safety features. Activities under this IP may begin when an application for the manufacture or construction of an advanced power reactor facility has been submitted to the NRC and accepted/docketed by the NRC for review. This includes applications for a Limited Work Authorization (LWA), Construction Permit (CP), Combined License (COL), or Manufacturing License (ML). This IP is no longer applicable to an advanced reactor once the advanced reactor has been transferred to the appropriate operating reactor oversight process (ROP).

The inspection guidance in this IP and its attachments applies to activities performed by applicants, licensees (including ML holders), and/or non-licensed project vendors.

The baseline inspection program (BIP) is both scalable and flexible so that it results in a planned inspection footprint that is commensurate with the expected risk posed by advanced reactor facilities and, based on lessons learned from implementing the construction Reactor Oversight Program (cROP) during the construction of Vogtle units 3 and 4, allows for more efficient execution by providing necessary flexibility. The BIP is unique for each reactor design and is defined by the project-specific inspection scoping matrix. The BIP is the minimum inspection effort necessary to verify the cornerstone objectives are met, thereby ensuring that the facility has been constructed and will operate in conformity with the licensing bases. The BIP will be completed for each unit under construction to inform the Commission’s findings under 10 CFR 50.57 or 10 CFR 52.103(g), as applicable.

ACIP inspections employ vertical-slice inspection methodology, including inspections involving ITAAC. A vertical-slice inspection is an in-depth review of quality assurance (QA) program attributes associated with the manufacture or construction of an SSC. This strategy not only verifies the quality of the SSCs inspected but provides confidence that other SSCs in the same inspection area will also be constructed with quality in accordance with the QA program.

For example, a vertical slice inspection of safety-significant piping may include the QA program attributes of material procurement and control, design verification and control, welding, and testing. Verification that QA requirements have been met for these attributes would give the NRC confidence that the inspected piping will perform its safety function. Equally important, it would provide reasonable assurance that other safety-significant piping not directly inspected by the NRC has been fabricated and installed correctly and is capable of performing its required safety

functions. During these inspections, inspectors should also evaluate the acceptability of ITAAC-related processes and conduct performance-based inspections of ITAAC completion, if applicable.

The attachments to this IP, listed in Table 1, are performed concurrently with this IP at the appropriate time during assembly and construction for the items being inspected. To gain efficiency, two or more IP attachments may also be performed concurrently. This IP is intended to provide inspection requirements and guidance applicable to a wide variety of potential advanced reactor construction projects. These projects may vary greatly in scope, complexity, and risk to public health and safety. As a result, parts of the IPs may not be applicable or implemented at a specific facility. Applicable IPs will be identified in project-specific inspection scoping matrices through identification of inspection areas (i.e., matrix columns), as described in IMC 2573.

Inspection samples should be pre-planned based on expected SSC status at the time of inspection. The project-specific matrix contains information to aid inspectors in choosing the most appropriate inspection samples. This information includes operational and design/construction risk characterizations for each SSC, or group of SSCs in the matrix. Other project-specific factors should also be considered as appropriate (e.g., inspectors should review the ARCOP Information Management System (AIMS) for the applicable project-specific Inspection Scoping and Planning Matrix to determine if any previously identified SSC open issues, findings, or observations have been captured and documented relevant to the planned inspection activities.

In general, higher risk sample opportunities should be prioritized over lower risk sample opportunities. However, when SSC status is not as expected during an inspection, inspectors should use the project-specific matrix to choose any alternate available inspection opportunities in the matrix to inspect.

Specific Guidance

03.01 Vertical Slice Inspection of Quality Assurance

Inspectors should familiarize themselves with the licensee's QAP requirements and the implementation procedures. To attain reasonable assurance that performance within an inspection area is adequate, inspectors shall implement a "vertical slice" inspection approach during each inspection of the SSCs. During vertical slice inspections, not only are SSCs inspected for functionality in accordance with the applicable IP 75001 attachments (i.e., 75001.XX inspection area procedure), inspection is also performed in accordance with Appendix A of this procedure, of quality assurance attributes identified in 10 CFR 50, Appendix B, and the licensee's QAP.

03.02 SSC Inspection Samples

Technical requirements are established by the licensing bases for the facility. The approved design is prescribed by a "flow-down" of technical requirements from the NRC-approved safety analysis report to design specifications and drawings. These design output documents will usually refer to industry codes and standards that provide specific requirements for the design, manufacture, fabrication, construction and testing of the SSCs. Inspectors should be aware that inspection of an SSC in one inspection area may have performance criteria and technical details related to more disciplines than just the IP being implemented. Accordingly, the inspection procedures may guide the inspectors to other related IPs, as needed.

Using the Table 1 IPs (i.e., IP 75001.XX) in this procedure and the project-specific inspection scoping matrix, determine if activities associated with the design, fabrication, manufacture, construction, installation, and testing of safety-related and non-safety-related, safety significant SSCs are being completed in accordance with applicable technical, quality, and regulatory requirements. Use one or more of the following:

a. Direct Observation

Observe in-process manufacturing and construction-related activities including fabrication, qualification, assembly, installation, inspection, examination, and testing to determine if the activity is being performed in accordance with work control documents (e.g., applicable instructions, procedures, and/or drawings).

During the observation of in-process manufacturing and construction-related activities, the inspectors should note relevant information to support other elements of their inspection. For example, during the observation of a test, the inspectors should note the following: (1) name of person performing test, (2) version of test procedure, (3) serial numbers of measuring and testing equipment, (4) component serial number or another unique identifier, etc. This information can then be used to verify that test personnel were adequately qualified, that the correct version of the testing procedure was used, that the measuring and test equipment was properly calibrated, that the equipment met the proper qualification requirements, and that parts and components met the proper handling, storage, and control requirements.

b. Record Review

The inspectors should review a sample of completed records to determine if the work activity was performed in accordance with applicable instructions, procedures, and/or drawings. For the records reviewed, the inspectors should determine if the records were (1) adequate to furnish identifiable and retrievable evidence of activities affecting quality, and (2) met other requirements prescribed by the licensee's record management program.

If possible, the inspectors should also perform a walkdown of the completed work activity associated with the records reviewed, to determine if the as-built SSC conforms with the final design, construction documents, and the records reviewed.

c. Independent Assessment/Inspection

The inspectors may also conduct an independent assessment or inspection (e.g., walkdown, taking photographs, or gathering raw condition monitoring data) to determine if the as-built SSC conforms to the final design.

03.03 Verification of ITAAC Acceptance Criteria (if applicable)

Verify the inspections, tests, and analysis (ITA) are performed and that the acceptance criteria (AC) in the combined license (COL) are met for ITAAC. Review the licensee's plan for completion of applicable ITAAC associated with the work activities being inspected. Review the activities that the licensee intends to credit for future ITAAC closure. For example, if the licensee intends to rely on a specific quality control (QC) observation during the installation of an SSC, then the inspector should review a sample of these QC observations to determine if the activity was performed in accordance with applicable quality and technical requirements. ITAAC closure documents are QA records. This means

that even if an ITAAC is for a non-safety-related SSC, the completion package and subsequent notifications on ITAAC will be controlled by the QAP.

03.04 Inspection of Activities Required by Operational Programs

Operational programs are specific programs that are required by regulations and the license. The required programs are listed in the FSAR and as a condition of the license. Risk-informed performance based (RIPB) inspections of operational programs associated with 75001 inspections will be performed as part of the associated technical inspection area and guidance for this portion of the inspection is included in the IP 75001.XX procedures listed in Table 1. Individual inspections are not intended to be full programmatic reviews of the program but should include a sampling of the program requirements as applied to the SSC being inspected.

Inspect implementation of operational program activities as specified in the IP 75001 attachments (i.e., 75001.XX). These inspection activities include operational programs related to Pre-Service Inspection (PSI); Reliability and Integrity Management Program (RIMP); Pre-Service Testing (PST); Reactor Vessel Material Surveillance, Containment Leakage Rate, Comprehensive Vibration Assessment Program; Environmental, Seismic, and Functional Qualification of Mechanical and Electrical Equipment (EQ), and the Motor-Operated Valve Program.

75001-04 RESOURCE ESTIMATE

The resources required to complete this IP will vary according to several different variables associated with reactor construction projects. Refer to the project-specific inspection scoping matrix for project-specific resource estimates. All planning, coordination, and inspection resources expended in the conduct of IP 75001 activities are allocated to one of the inspection area IPs (i.e., matrix columns) attached to this procedure.

75001-05 PROCEDURE COMPLETION

This IP is complete when sufficient inspection information is obtained to support the required performance assessments described in IMC 2572 and the NRC has reasonable assurance that performance in each inspection area of the project-specific inspection scoping matrix is adequate.

75001-06 REFERENCES

None

END

List of Appendices:

Appendix A: Guidance on the Evaluation of QA Program Implementation

Table 1: Inspection Procedure 75001 Attachments

IP 75001.01	Buildings and Structures
IP 75001.02	Containment and Containment Penetrations
IP 75001.03	Piping, Pipe Supports and Restraints
IP 75001.04	Reactor Pressure Vessel (RPV) and RPV Internals
IP 75001.05	Mechanical Systems and Components
IP 75001.06	Electrical Systems, Components, and Cables
IP 75001.07	Instrumentation and Control (I&C) Systems and Components
IP 75001.08	Heating, Ventilation, and Air Conditioning Systems
IP 75001.09	Load and Fuel Handling Equipment
IP 75001.10	Preoperational Testing

Supporting Inspection Procedures

IP 75001.WELD	Welding and Non-destructive Examination
IP 75001.ENG	Design & Fabrication Requirements
IP 75001.QUAL	Mechanical, Electrical, and Instrumentation and Controls (I&C) Component Qualification

Appendix A: Implementation of the Quality Assurance Program

Every applicant for a construction permit (CP) is required by the provisions of 10 CFR 50.34 to include in its preliminary safety analysis report a description of the quality assurance program (QAP) to be applied to the design, fabrication, construction, and testing of the structures, systems, and components (SSCs) of the facility. Every applicant for an operating license (OL) is required to include, in its final safety analysis report, information pertaining to the managerial and administrative controls to be used to ensure safe operation. Every applicant for a combined license (COL) under part 52 is required by the provisions of 10 CFR 52.79 to include in its final safety analysis report a description of the quality assurance applied to the design, and to be applied to the fabrication, construction, and testing of the SSCs of the facility and to the managerial and administrative controls to be used to ensure safe operation.

In accordance with Criterion II of 10 CFR Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, applicants shall establish at the earliest practicable time, consistent with the schedule for accomplishing the safety-related activities, a quality assurance program which complies with the requirements of 10 CFR 50, Appendix B. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout plant life in accordance with those policies, procedures, or instructions. Additionally, 10 CFR 50.34 requires that the QA program be implemented during construction for all SSCs important to safety. Depending on the licensing basis, this usually includes non-safety-related safety significant (NSRSS) SSCs. QA requirements for NSRSS may be different than the requirements of 10 CFR Appendix B and are contained in the licensee's QA program documents.

QA program requirements must be appropriately passed down to licensed manufacturers, non-licensed project vendors, and contractors when licensees subcontract work activities to other organizations. Licensees are ultimately responsible for the quality of SSCs; therefore, licensees should provide an adequate level of quality assurance oversight of licensed manufacturers, non-licensed project vendors, and contractors, even if they have a QAP that has been reviewed and approved by NRC staff.

To attain reasonable assurance that performance within each inspection area (i.e., matrix column) is adequate, ARCOP uses a "vertical slice" approach to inspection. During a vertical slice inspection, the SSC technical aspects are inspected in accordance with the applicable IP 75001 attachment (i.e., 75001.XX inspection area procedure), and inspection is also performed using the guidance in this appendix to verify the licensee, and its contractors, are properly implementing the quality assurance program and the QA criterion specified in 10 CFR Part 50, Appendix B.

This approach requires inspectors to sample, as an integral part of each inspection, applicable QAP attributes for the SSCs being inspected. This approach is used to gain confidence that SSCs not inspected are also being fabricated, constructed, installed, and tested with adequate quality.

Inspection activities listed below can be used to perform vertical slice inspections. They are consistent with the QA criteria in 10 CFR 50 Appendix B. This list is not all inclusive and inspectors should leverage operating experience and subject matter expertise to select the most effective inspection activity for their assessment of quality. The QA requirements for NSRSS SSCs are expected to vary slightly depending on the specifics of the licensee's approved QAP. Inspectors should choose for inspection those QA attributes that are most appropriate for the SSCs being inspected.

Criterion I: Organization

Assess the organizational structure and QA personnel by performing the following:

1. Review the organizational structure and functional relationships. Identify the individuals or the organization responsible for defining the overall effectiveness of the QA program. Verify that the organizational description addresses the organizational structure, functional responsibilities, levels of authority, and interfaces.

2. Verify qualifications, responsibilities, and duties of personnel performing activities affecting quality. Verify that personnel or organizations performing QA program implementation and verification activities have the authority, independence, and organizational freedom (independent from cost or schedule considerations) to identify quality problems, recommend solutions, and verify implementation of solutions.

Criterion II: QA Program

1. Review a sample of training and qualification records for the personnel involved in the activities associated with the SSC(s) inspected to determine if the personnel were adequately qualified in accordance with the training program.

2. Determine if the activities were accomplished under suitably controlled conditions. Specifically, observe or review construction activities to determine if the licensee used appropriate equipment; maintained suitable environmental conditions, such as adequate temperature, humidity, cleanness; and, verified that prerequisites for the given activity were satisfied.

Criterion III: Design Control

For the SSC(s) being inspected:

1. Verify that design activities were accomplished in accordance with procedures or purchase order requirements and specifications.

2. Verify that materials, parts, equipment, and processes that are essential to the required safety function(s) are those specified by design requirements. Assessment of commercial-grade dedication activities may be accomplished using guidance in IP 43004, "Inspection of Commercial-Grade Dedication Programs."

3. Verify that applicable design inputs are correctly translated into specifications, drawings, procedures, and instructions. Verify that the design translation is supported by engineering data (e.g., calculations, performance test, etc.), including verification

that design inputs are satisfied. The final design (approved design output documents and approved changes) is relatable to the design input and identifies assemblies and/or components that are part of the item being designed.

4. Verify that the correct procedures are implemented to control design changes applicable to the SSC inspected. Verify that design changes are subject to design control measures commensurate with those applied to the original design.

Criterion IV: Procurement Document Control

1. Verify that the procurement document specifications for the SSC(s) being inspected meet the requirements in the QAP.

2. Verify that deviations from previously established requirements, including design changes, are adequately controlled and reviewed. These deviations are documented to provide objective evidence of the review. Verify that procurement document changes are subject to the same degree of control as used in the preparation of the original documents.

Criterion V: Instructions, Procedures, and Drawings

For the SSC(s) being inspected, verify the implementation of work and quality instructions, procedures, and drawings by performing the following:

1. Verify that work and inspection procedures were established, implemented, and followed (including those related to sub-vendor activities if applicable).

2. Verify that instructions, procedures, and drawings were reviewed, approved, and controlled.

3. Verify that individuals performing activities related to quality have available to them the most recently approved specifications, procedures, and instructions pertinent to activities.

4. Verify that instructions, procedures, and drawings include quantitative and qualitative acceptance criteria for determining that activities have been satisfactorily accomplished.

Criterion VI: Document Control

For the SSC(s) being inspected:

While reviewing documents such as design drawings, as-built drawings, engineering calculations, design specifications, material analysis records, purchase orders and related documents, receipt inspections, audit and surveillance procedures, technical specifications, nonconformance reports, corrective action reports, work instructions and procedures, calibration procedures, quality verification procedures, inspection and test reports, verify that they are in a document control program and are reviewed/approved by qualified personnel.

Criterion VII: Control of Purchased Material, Equipment, and Services

For a sample of the SSCs being inspected,

1. Verify that items and services were procured from qualified vendors (i.e., on nuclear quality approved vendor/supplier list (ASL)). Examples of procured services include calibration, non-destructive examination (NDE), testing laboratories, software codes/programs, heat treatment, third-party inspections, engineering and consulting services, installation, repair, or maintenance work.

2. Verify that appropriate methods are used to accept a basic component from a supplier, such as certificates of conformance, source verifications, audits, surveillances, receiving inspections, or a combination thereof.

3. Verify that certificates of conformance/compliance identify the material, equipment, or service supplied; identify specific procurement requirements (codes, standards, or other specifications such as cyber security requirements) that have been met as well as those that have not been met, together with an explanation and the means for resolving the nonconformance; and identify the supplier's QA individual responsible for authenticating such certificates. If any criteria have not been met, verify if a nonconformance report was initiated and follow up on its resolution.

4. Verify that receiving inspections examine objective evidence of purchased items by verifying attributes specified in procurement documents. Receiving inspections should verify, as a minimum, item configuration, dimensions, physical characteristics, and identification and traceability of material and equipment, including status of inspection or tests performed, as required. When possible, observe and assess actual techniques being used.

5. A vendor may dedicate commercial-grade calibration and testing services purchased from domestic and international calibration and testing laboratories accredited by a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). A vendor may take credit for ILAC accreditation in lieu of performing a commercial-grade survey as part of the commercial-grade dedication process.

   Verify that the vendor is adequately implementing the conditions listed in the SER of the Nuclear Energy Institute's (NEI) document 14-05A, "Guidelines for the Use of Accreditation in Lieu of Commercial Grade Surveys for Procurement of Laboratory Calibration and Test Services," Revision 1 (ML20322A019).

   The NRC continues to find the Arizona Public Service (APS) SER (ML052710224) to be an acceptable method for vendors to use as an alternative to implementing the ILAC accreditation process. For a vendor using the APS SER, refer to the APS SER to verify that the conditions listed are being adequately implemented.

Criterion VIII: Identification and Control of Materials, Parts, and Components

Assess the identification and control of purchased items by performing the following:

1. Verify that items are identified and controlled by the QAP procedures.

2. Verify that identification markings, when used, are applied using materials and methods that provide a clear and legible identification and do not adversely affect the function or service life of the item. Verify that markings are maintained on the item or in documents traceable to the item.

3. Verify that physical identification is used to the maximum extent possible. Ensure that, where physical identification on the item is either impractical or insufficient, physical separation, procedural control, or other appropriate means are employed.

Criterion IX: Control of Special Processes

Assess the control of special processes associated with the SSC(s) being inspected by performing the following:

1. Verify that implementation procedures for the control of the special process were used correctly. Examples of special processes include welding, NDE, heat treatment, soldering, painting, and electroplating.

2. Verify that special process control documents such as travelers, process sheets, instructions, checklists, or other appropriate means, were generated as necessary.

3. Verify that process control documents include, as a minimum, personnel and equipment qualification requirements; conditions necessary for accomplishing the process; acceptance criteria; results of completion of specific operations at checkpoints of fabrication, manufacture, or installation; and signature, initials, or stamp and date of the authorized representative for the activities witnessed.

4. Verify that special processes are performed by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

5. Verify qualification records are maintained as appropriate for the currently qualified personnel, processes, and equipment for each special process.

6. When possible, observe and assess actual techniques being used and their acceptability relative to contract/procedural requirements.

Criterion X: Inspection

Assess inspection controls by performing the following:

1. Verify that the SSC(s) has been inspected according to QAP procedural requirements. Examples of inspections include source, receipt, in-process, in-service, final, operations, modification, maintenance, and third-party oversight.

2. Verify that inspection control documents such as travelers, process sheets, instructions, checklists, or other appropriate means were generated, as necessary.

3. Verify that inspection control documents include, as a minimum, the item inspected, inspection date, type of observation, results of examination and tests, and the signature, initials, or stamp and date of the authorized representative (i.e., authorized nuclear inspector) for the activities witnessed.

4. Verify that mandatory hold points are indicated in the controlling documents and that work does not proceed without appropriate approval.

5. Verify that inspections are performed by qualified persons other than those who performed or directly supervised the work being inspected.

6. Verify that inspection results are documented by the inspector and reviewed by authorized personnel qualified to evaluate the technical adequacy of the inspection results.

7. When possible, observe and assess actual techniques being used and their acceptability relative to contract/procedural requirements.

Criterion XI: Test Control

Assess test controls by performing the following:

1. Verify that the SSC(s) has been tested according to QAP procedural requirements. Examples of tests include prototype qualification, production, construction, pre-operational, pre-service, operational, post-maintenance, post-modification, computer program/software, and proof tests prior to installation.

2. Verify that test procedures include or reference test objectives, test requirements, applicable prerequisites, and acceptance criteria contained in the applicable design or technical documents.

3. Verify that test results are documented and evaluated by a qualified individual to ensure the test requirements have been satisfied. Test records, as a minimum, should identify the item tested, date of test, tester or data recorder, type of observation, instruments used and the validity of their calibration, results and acceptability, action taken in connection with any noted deviations, and the individual evaluating test results.

4. When possible, observe and assess actual techniques being used and their acceptability relative to contract/procedural requirements.

Criterion XII: Control of Measuring and Test Equipment

Measuring and Test Equipment (M&TE), including tools, gauges, instruments, and other devices used in activities affecting quality, must be properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits. The M&TE program for testing equipment applies to both on the shelf and installed gauges, indicators, and other devices.

Assess M&TE controls for the SSCs inspected by performing the following:

1. Verify that a sample of the MT&E associated with the work activity controlled according to QAP procedural requirements. Examples of M&TE include instruments, tools, gauges, and nondestructive examination equipment.

2. Verify equipment calibration history. Check for dates calibrated, the individual who performed the calibration, results, due date, primary standard, and purchase order number, if a vendor calibrated the instruments.

3. Verify that M&TE is calibrated, adjusted, and maintained at prescribed intervals prior to use. Verify that the method of calibration for each device is defined.

4. Verify that M&TE is labeled, tagged, handled and stored, or otherwise controlled to indicate the calibration status of the instrument and ensure its traceability to calibration test data.

5. When M&TE is found to be out of calibration, provisions in the procedures require an evaluation to verify if previous inspection or test results are affected.

6. Verify that records are maintained to indicate calibration status. Review these records and check calibration logs for As Found/As Left information.

7. Verify that out-of-calibration devices are tagged or segregated.

8. Verify that devices consistently found out of calibration are repaired or replaced.

9. When possible, observe and assess actual techniques being used and their acceptability relative to contract/procedural requirements.

Criterion XIII: Handling, Storage and Shipping

It should be noted that all safety-related and non-safety related safety significant items may be stored off-site.

Assess handling, storage, and shipping controls of the SSCs inspected by performing the following:

1. Verify that the SSCs have been handled, stored and shipped according to QAP procedures, including packaging, marking/labeling, storing, status of shipment of items and components, and control of limited shelf-life materials.

2. Verify that required special equipment and protective environments are provided, if necessary. Examples of special equipment include containers, shock absorbers, and accelerometers. Examples of protected environments include humidity and temperature controls, specific moisture content levels, and inert gas atmospheres.

3. Verify that operators of special handling equipment are experienced or trained in the use of the equipment.

4. When possible, observe and assess actual techniques being used and their acceptability relative to contract/procedural requirements.

Criterion XIV: Inspection, Test, and Operating Status

Assess inspection, test, and operating status controls for the SSC(s) inspected by performing the following:

1. Verify that the status of inspections and tests performed on individual items are indicated either on the item or on documentation traceable to the item.

2. Verify that procedures specify the authority for application and removal of status indicators.

3. When possible, observe and assess actual techniques being used and their acceptability relative to procedural requirements.

Criterion XV: Nonconforming Materials, Parts, or Components

The inspectors should review a sample of nonconformance reports associated with the work activity inspected to determine if the nonconforming items were reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

Assess nonconforming item controls by performing the following:

1. Verify that nonconformances are processed according to QAP procedures.

2. Verify that nonconforming items are identified, documented, evaluated, segregated (when practical), and dispositioned (along with technical justifications).

3. Verify that instructions or procedures are followed for repair and rework activities (where required), and re-inspection of repaired and reworked items (where required).

4. Review and verify that the licensee has taken adequate actions regarding nonconforming materials or items to prevent their inadvertent use or installation.

5. Verify that nonconforming items are reviewed and dispositioned in accordance with QAP procedures.

6. Verify that technical justifications are documented to verify the acceptability of nonconforming items dispositioned as repaired or use-as-is.

7. Verify that nonconformance(s) to design requirements dispositioned as use-as-is or repaired are subject to design control measures commensurate with those applied to the original design.

8. Verify that a 10 CFR Part 21 report was submitted to the NRC, when necessary.

Criterion XVI: Corrective Action

The licensee may use multiple processes to accomplish its CAP, or it may employ a single process. Licensees may choose to process issues that are not conditions adverse to quality through alternative means. For the SSC inspected, select a sample of corrective action reports and related documents for review.

Assess corrective action controls by performing the following:

1. Verify that conditions adverse to quality are identified and processed according to QAP procedures.

2. Verify that corrective action reports provide for documentation and description of the condition adverse to quality, corrective actions taken to address the condition adverse to quality, the cause and corrective action taken to prevent recurrence for significant conditions adverse to quality, review and approval by the responsible authority, status of corrective actions reviewed, and follow-up action taken to verify timely and effective implementation of corrective action.

3. Verify that a 10 CFR Part 21 report was submitted to the NRC, when necessary.

4. Verify that deficiencies identified (e.g., receipt inspection rejections, nonconformances, etc.) are adequately assessed and entered in either the nonconformance or corrective action program.

5. Verify that adverse trends of conditions adverse to quality are addressed.

Criterion XVII: Quality Assurance Records

QA records are created to support objective evidence that the plant has been constructed in accordance with design, regulatory requirements, and implementing documents. These records must be traceable to the activities that they support. Examples of QA records include inspection and test records; audit reports; quality-related procedures/instructions/drawings; qualifications and certifications; material analysis records; vendor-supplied documents; certifications of compliance/conformance; laboratory/engineering/manufacturing operating logs; calibration records; and nonconformance documents.

For the SSC(s) inspected, assess QA records controls by performing the following:

1. Verify the licensee controls QA records in accordance with QAP procedures.

2. Verify that the records sampled are legible, adequate, retrievable, adequately protected, and traceable to markings, identification tags, or other means of identifying materials, components, and activities important to safety.

3. Verify that records are stored in a manner that precludes deterioration, environmental effects, damage, and loss.

4. Verify that QA records stored in electronic media are subject to adequate controls. Electronic recordkeeping systems shall maintain integrity, authenticity, and acceptability of QA records during their required retention period in accordance with NRC requirements. This includes management of software configuration, record migration/regeneration programs, and electronic media control.

5. Verify that design records are stored and maintained in accordance with established procedures. Design records include, but are not limited to, the final design output, subsequent revisions, the important design steps (e.g., calculations, analyses, and computer programs), and the sources of input that support the final output.

Criterion XVIII: Audits

Personnel conducting audits evaluate programmatic compliance and effectiveness of the implementation of the QA program. Licensee audits are independent, planned and documented evaluations performed by trained QA personnel. Two categories of audits are generally performed by the licensee: internal audits of the activities performed by the licensee and its contractors; and external audits of contractors that provide safety-related items and services and are placed on an approved supplier list (ASL) or provide commercial grade items for dedication in accordance with 10 CFR Part 21.

Assess audits associated with the SSCs inspected by performing the following:

1. Verify that audits are performed in accordance with QAP procedures.

2. Verify that audits performed followed QAP procedures which describe the scope and purpose of the audit, frequency or schedule requirements, audit criteria, basis for re-audit, documentation of audit results, management review and assessment, corrective action, and follow-up (where required).

3. Verify that audit teams were selected using qualified auditors. Verify that selected auditors did not audit their own work.

4. During inspections at the American Society of Mechanical Engineers (ASME) certificate holders, verify that the Authorized Nuclear Inspector (ANI) performed its third-party oversight as required. Verify that the ANI reviewed and signed the ASME Boiler and Pressure Vessel Code, Section III “Rules for Construction of Nuclear Facility Components” data report.

Attachment 1: Revision History For 75001

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	ML26057A076 04/01/26 CN 26-011	Initial Issuance.	N/A	N/A