



MAINE YANKEE ATOMIC POWER COMPANY

OPERATIONAL QUALITY ASSURANCE PROGRAM

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Rev. No.: 0
Date: September 10, 1980

POLICY STATEMENT

Operational Quality Assurance Program

As a matter of company policy, the Maine Yankee Atomic Power Company Operational Quality Assurance Program shall comply with the requirements of the Code of Federal Regulations Title 10, Part 50, Appendix B, with respect to the operation and maintenance of, and changes to the nuclear generating facility. The Program shall be consistent with ANSI Standard N18.7-1976 and its referenced standards; and the Regulatory Guides specified in Section II, "Quality Assurance Program" of the Topical Report. Any exceptions shall be specifically noted.

The Vice President Manager of Operations is responsible for establishment and implementation of the Program within the Maine Yankee Atomic Power Company.

The Director of Operational Quality Assurance shall be responsible for ensuring that the Program is implemented for all activities requiring quality assurance. The Quality Assurance staff shall be responsible for auditing the program as necessary and surveying/inspecting activities required by the Program to assure compliance with its requirements. The Quality Assurance staff shall have the authority and organizational freedom necessary to meet the requirements of 10CFR50, Appendix B.

The Plant Manager shall be responsible for the day-to-day implementation of the Program's procedural requirements at the plant.

The Nuclear Safety Audit and Review Committee (NSARC) shall periodically review the adequacy and effectiveness of the Program. Any discrepancies in the implementation of this policy or the Program that are revealed during the review and that require corporate action for correction, will be reported to both the Vice President Manager of Operations and the Vice President, Yankee Nuclear Services Division, together with appropriate recommendations.

Implementation of this policy will enhance the reliability and safety of the nuclear generating facility. Each person involved in activities affecting the quality of structures, systems, and components used to prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public, shall be responsible for assuring quality in his own work, and for compliance with the requirements of the Program. The Operational Quality Assurance Program is a document which shall be adhered to by all responsible organizations and individuals.

Elwin W. Thurlow
President



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I. ORGANIZATION

A. SCOPE

This section of the Operational Quality Assurance Program describes the duties and responsibilities of the personnel involved in establishing and executing the Operational Quality Assurance Program.

B. RESPONSIBILITY

The responsibility for design, evaluation, maintenance, and operation of the Plant rests with the Maine Yankee Atomic Power Company. The responsibility for developing and implementing the Operational Quality Assurance Program is vested in the Vice President Manager of Operations. He has delegated areas of authority for the development and implementation of certain phases of the Program as set forth in the following paragraphs of this section.

The Operational Quality Assurance Department has the organizational responsibility for the continuing review and audit of the implementation of the Operational Quality Assurance Program.

C. ORGANIZATIONAL RELATIONSHIPS

Maine Yankee Atomic Power Company lines of authority of all personnel involved in the implementation of the Operational Quality Assurance Program are shown in Figure 1.

A Vice President of Maine Yankee Atomic Power Company is also a corporate officer of the Yankee Atomic Electric Company, Nuclear Services Division (YNSD), which has a continuing contractual obligation to provide services to the Maine Yankee Atomic Power Company. This interlocking corporate officer shall be herein identified as the Vice President (YNSD). The Vice President (YNSD) conducts, through NSARC, an independent review of all aspects of plant safety and, by virtue of his interlocking positions, assures that YNSD provides the services assigned and requested.

D. QUALITY ASSURANCE PROGRAM RESPONSIBILITIES

1. Vice President Manager of Operations

- a. Assumes and maintains responsibility for the Operational Quality Assurance Program.
- b. Provides for establishment and implementation of the Operational Quality Assurance Program.



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- c. Establishes and enforces company policies in the area of Operational Quality Assurance.
- d. Establishes and implements an organization capable of and directed toward a proper Operational Quality Assurance Program.
- e. Provides for a periodic review of the Operational Quality Assurance Program to determine the adequacy and effectiveness of the Program.
- f. Ensures that personnel performing Quality Assurance functions have sufficient authority and organizational freedom to:
 - i. identify quality problems,
 - ii. initiate, recommend, or provide solutions through designated channels, and,
 - iii. verify implementation of solutions.
- g. Provides for independent operational review and/or approval of plant repairs, and design changes.
- h. Provides for review and approval of training programs, plant procedures, drawings, specifications and purchase requests.
- i. Provides for and coordinates review of industry operating problems with the aim of minimizing likelihood of occurrence at the plant.
- j. Evaluates the audit "discrepancy", "discrepancy response", and "Recommended Corrective Action" and prepares "Implementation Directives" to resolve disagreements.
- k. Approves all changes to the Operational Quality Assurance Program.
- l. Reviews the qualification requirements for the principal Quality Assurance management position to assure competence commensurate with responsibility. (See Appendix A)
- m. Provides for resolution of NSARC recommendations.



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2. Vice President - Yankee Nuclear Services Division

- a. Provide independent review of all aspects of plant safety, via the Nuclear Safety Audit and Review Committee. Appoint the membership of the Committee, and review their reports.
- b. Monitor response to NSAR Committee and MY Project Manager recommendations and bring to the attention of the Maine Yankee President, all safety related disputes, disagreements or discrepancies which cannot be resolved at a lower level.
- c. Provides for independent audits of the Maine Yankee Atomic Power Company Operational Quality Assurance Department to verify compliance with the Quality Assurance Program.
- d. Provides for independent engineering review of proposed design changes to verify the adequacy of designs and to assure the quality and consistency with safety and licensing requirements.
- e. Provides for the development, maintenance, and control of special process procedures, such as, NDE, Welding, and Heat Treating.
- f. Provides for technical, engineering, licensing, compliance, operational, and quality assurance support as requested.
- g. Provides for Internal Audits, vendor surveillance, inspection, or audit as requested by the Manager of Nuclear Support.
- h. Provides for emergency preparedness, environmental, fuel management, and nuclear engineering support as requested.
- i. Provides for the development, maintenance, and control of Yankee Nuclear Services Division General Specifications.
- j. Provides a qualified Fire Protection Engineer to review design changes to fire protection systems and components.
- k. Review the operational quality assurance program and changes thereto.

3. Manager - Nuclear Support

- a. Reports Directly to the Vice President Manager of Operations.



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- b. Reviews all changes to the Operational Quality Assurance Program Manual.
- c. Provides for review of and compliance with federal and state regulations and standards for nuclear power facilities.
- d. Provides for the control and storage of appropriate quality assurance records.
- e. Provides for the engineering and quality assurance review of design changes, plant alterations, material/service purchase requests, drawings, specifications and appropriate procedures.
- f. Provides for the coordination of the engineering requirements necessary to support changes related to operation of the plant.
- g. Provides "Recommended Corrective Action" to be taken on Internal Audit Discrepancies.
- h. Establishes the qualification requirements for the principal Quality Assurance management position to assure competence commensurate with responsibility.
- i. Resolves disputes between Quality Assurance Department and other departments/organizations, involving quality.
- j. Provides for independent verification of plant operation by individuals or groups who do not have direct responsibility for performing the work, to assure that applicable approved procedures, specifications, licenses and safety regulations are satisfied.
- k. Acts in an advisory capacity in the areas of engineering, licensing, compliance, and quality assurance when requested by the Plant Operation Review Committee (PORC) or the Nuclear Safety Audit and Review Committee (NSARC).
- l. Provides for the coordination of activities necessary to support plant environmental issues.
- m. Provides for the coordination of activities necessary to support plant safety analysis issues.
- n. Provides for the surveillance, inspection, audit of contractors to assess the control of quality by the contractors.



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- o. Provides for the review of nonconformances and corrective actions.
- p. Provides for interfacing between the Company and Yankee Nuclear Services Division in Engineering, Licensing, Operations Support, Fire Protection, and Quality Assurance.

4. Plant Manager

- a. Reports directly to the Vice President Manager of Operations.
- b. Reviews all changes to the Operational Quality Assurance Program Manual.
- c. Directs the on-site implementation of the Operational Quality Assurance Program, including compliance with all State and Federal licenses and regulations.
- d. Acts as Chairman of the Plant Operations Review Committee with authority and responsibility as established in the Technical Specifications of the plant operating license.
- e. Assumes overall responsibility for all activities at the plant.
- f. Provides for the coordination of plant security and Fire Protection activities.
- g. Acts in an advisory capacity in the areas of plant activities, such as, maintenance, operation, testing, training, when requested by NSARC.
- h. Provides for interfacing between the Company and Yankee Nuclear Services Division for on-site activities.
- i. Provides for the review of industry operating problems with the aim of minimizing likelihood of occurrence at the plant.
- j. Provides for the coordination of activities necessary to support plant reporting requirements.
- k. Provides for the coordination of plant activities necessary to support the plant environmental surveillance programs.
- l. Provides for implementation of the Maine Yankee Emergency Plan.

5. Administrative Supervisor

- a. Reports directly to the Manager of Nuclear Support.



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- b. Establishes the means for the control and distribution of the Operational Quality Assurance Program and revisions thereto.
 - c. Establishes the means for the control, distribution, and storage of the Quality Assurance Documents and Records under the jurisdiction of the Manager of Nuclear Support.
 - d. Establishes the means for the control and distribution of the Maine Yankee audit and surveillance program.
6. Director of Plant Engineering
- a. Reports directly to the Manager of Nuclear Support.
 - b. Maintains the Operational Quality Assurance Program Manual and the associated administrative implementing quality assurance procedures.
 - c. Coordinates the development, review, and implementation of plant changes and alterations.
 - d. Direct the Plant Inservice Inspection Program.
 - e. Directs the engineering reviews of material purchase requests.
 - f. Directs the engineering reviews of nonconformances and corrective actions.
 - g. Directs independent engineering and quality assurance reviews of maintenance and repair activities.
 - h. Maintains and disseminates information regarding codes, standards, criteria, and guidelines to applicable personnel.
 - i. Coordinates interfacing plant engineering activities between the Company, Yankee Nuclear Services Division, and outside agencies.
 - j. Directs plant surveillance programs assigned by the Manager of Nuclear Support.
 - k. Directs plant test programs assigned by the Manager of Nuclear Support.



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- l. Acts in an advisory capacity in the area of plant engineering when requested by PORC or NSARC.
 - m. Provides for technical support to the plant.
 - n. Provides for the documentation and maintenance of quality assurance records associated with plant engineering.
7. Director of Nuclear Engineering and Licensing
- a. Reports directly to the Manager of Nuclear Support.
 - b. Acts in an advisory capacity in the areas of licensing and nuclear engineering when requested by PORC or NSARC.
 - c. Directs the licensing activities necessary to support and maintain the Technical Specifications, Safety Analysis Report, and other licensing issues.
 - d. Establishes and maintains radiological environmental surveillance programs.
 - e. Provides for the documentation and maintenance of quality assurance records in licensing.
 - f. Coordinates interfacing licensing activities between the Company, Yankee Nuclear Services Division, and outside agencies.
 - g. Coordinates interfacing nuclear engineering activities between the Company, Yankee Nuclear Services Division, and outside agencies.
 - h. Establishes Emergency Plans pursuant to state and federal regulatory requirements and Company policy.
 - i. Provides for the general supervision and coordination of all core component design and fuel cycle economic activities.
8. Director of Operational Quality Assurance
- a. Reports directly to the Manager of Nuclear Support.
 - b. Assures that the Operational Quality Assurance Program satisfies the requirements of 10CFR50, Appendix B ANSI N18.7-1976.



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- c. Directs the review of design changes and material purchase requests for adequacy of quality requirements.
- d. Directs the evaluation, inspection and/or surveillance of contractor/vendor activities at the operating plant to assure effective lines of communication and compliance with the applicable criteria of 10CFR50, Appendix B and ANSI N18.7-
- e. Directs the inspection, surveillance and/or audit of activities affecting the quality of structures, systems and components important to safety.
- f. Ensures through verification that the Program is implemented for all activities requiring quality assurance.
- g. Directs the independent verification of plant operational activities to assure that applicable approved procedures, specifications, licenses and safety regulations are satisfied.
- h. Reviews all changes to the Operational Quality Assurance Program Manual.
- i. Ensures that the Program is modified and/or revised as standards, regulations and experience dictate.
- j. Directs the quality assurance reviews of nonconformances.
- k. Coordinates interfacing quality assurance activities between the Company, Yankee Nuclear Services Division, and outside agencies.
- l. Acts in an advisory capacity in the area of quality assurance when requested by PORC or NSARC.
- m. Directs the Internal Audit Program to verify compliance with all aspects of the Quality Assurance Program and to determine the effectiveness of the program.
- n. Provides for the documentation and maintenance of department quality assurance records.
- o. Provides for the stoppage of unsatisfactory work.
- p. Provides for review and inspection of repair and maintenance activities.



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9. Director of Operational Support

- a. Reports directly to the Manager of Nuclear Support.
- b. Acts in an advisory capacity in the area of regulatory compliance when requested by PORC or NSARC.
- c. Directs the activities necessary to support federal and state enforcement documents.
- d. Provides for the documentation and maintenance of quality assurance records in regulatory compliance activities.
- e. Coordinates interfacing compliance activities between the Company, Yankee Nuclear Services Division, and outside agencies.
- f. Provides for operational support to the plant.

10. Administration Department Head

- a. Reports directly to the Plant Manager.
- b. Provides for an approved Plant Training Program and the implementation of the program.
- c. Provides for the coordination of activities necessary to maintain the Plant Training Manual.
- d. Establishes the means for the control, distribution, and storage of the Quality Assurance Documents and Records under the jurisdiction of the Plant Manager.
- e. Provides for an approved Fire Protection Program and training of personnel therein.
- f. Provides for an approved Security Program and training of personnel therein.
- g. Provides for the preparation of requisition for purchase orders.
- h. Provides for the control and identification of material and equipment upon receipt, storage, and issuance.
- i. Provides for the control and storage of Quality Assurance documentation of purchased materials.
- j. Provides for the control and maintenance of the plant spare parts inventory system.



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- k. Establishes the retention period for the Quality Assurance Documents and Records.

11. Maintenance Department Head

- a. Reports directly to the Plant Manager.
- b. Prepares, schedules and directs approved maintenance activities.
- c. Directs preparation and implementation of procedures utilizing sound engineering policies and practices for the installation of new material, equipment or spare parts.
- d. Provides for an approved program of preventive maintenance, calibration, and testing for instruments and electrical/mechanical equipment in conformance with established approved procedures.
- e. Provides for the implementation of a continuing surveillance program as outlined in the Technical Specifications.
- f. Provides for the training and qualification of department personnel in the application of special processes, such as, NDE and Welding.
- g. Provides for the documentation and maintenance of quality assurance records in Maintenance Department activities.

12. Operations Department Head

- a. Reports directly to the Plant Manager.
- b. Assures plant operations are conducted in accordance with approved documents and specifications.
- c. Provides for system surveillance and operational testing.
- d. Provides Maintenance Requests for the repair or replacement of defective parts and/or components.
- e. Verifies the operability of systems and/or components following maintenance, or changes by providing for the performance of written test documents which incorporate the requirements and acceptance criteria contained in applicable design documents.



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- f. Provides for the safe handling of core and reactor components during refueling operations.
- g. Provides for the documentation and maintenance of quality assurance records in Operation Department activities.
- h. Provides for the development, control, and maintenance of operating and emergency operating procedures.

13. Technical Support Department Head

- a. Reports directly to the Plant Manager.
- b. Provides for the general supervision and coordination of reactor physics and nuclear tests for plant operation and adherence to Technical Specifications.
- c. Follows and reviews radiation protection programs and activities at the plant.
- d. Establishes and maintains radiological and nonradiological effluent release control and surveillance program.
- e. Provides for the maintenance of refueling procedures relative to fuel core components handling and inspection.
- f. Performs fuel cycle, nuclear engineering, and economic studies requested by plant manager.
- g. Directs the on-site activities necessary to support federal and state enforcement documents.
- h. Provides for the documentation and maintenance of quality assurance records in chemistry, health physics, environmental, reactor physics and nuclear fuel.
- i. Provides for the control and maintenance of plant computer systems.
- j. Provides for the preparation and maintenance of procedures associated with radiological, chemistry, and reactor physics.

E. REVIEW AND AUDIT

Two committees have been established for the operating plant whose objectives are to insure the plant is operated safely, utilizing accepted engineering practices. The committees are charged with making recommendations to modify operational methods or safety precautions when appropriate.



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One Committee, the Plant Operations Review Committee, is made up of Plant personnel. The other Committee, the Nuclear Safety Audit and Review Committee, is made up of individuals not having line responsibility for the operation of the plant.

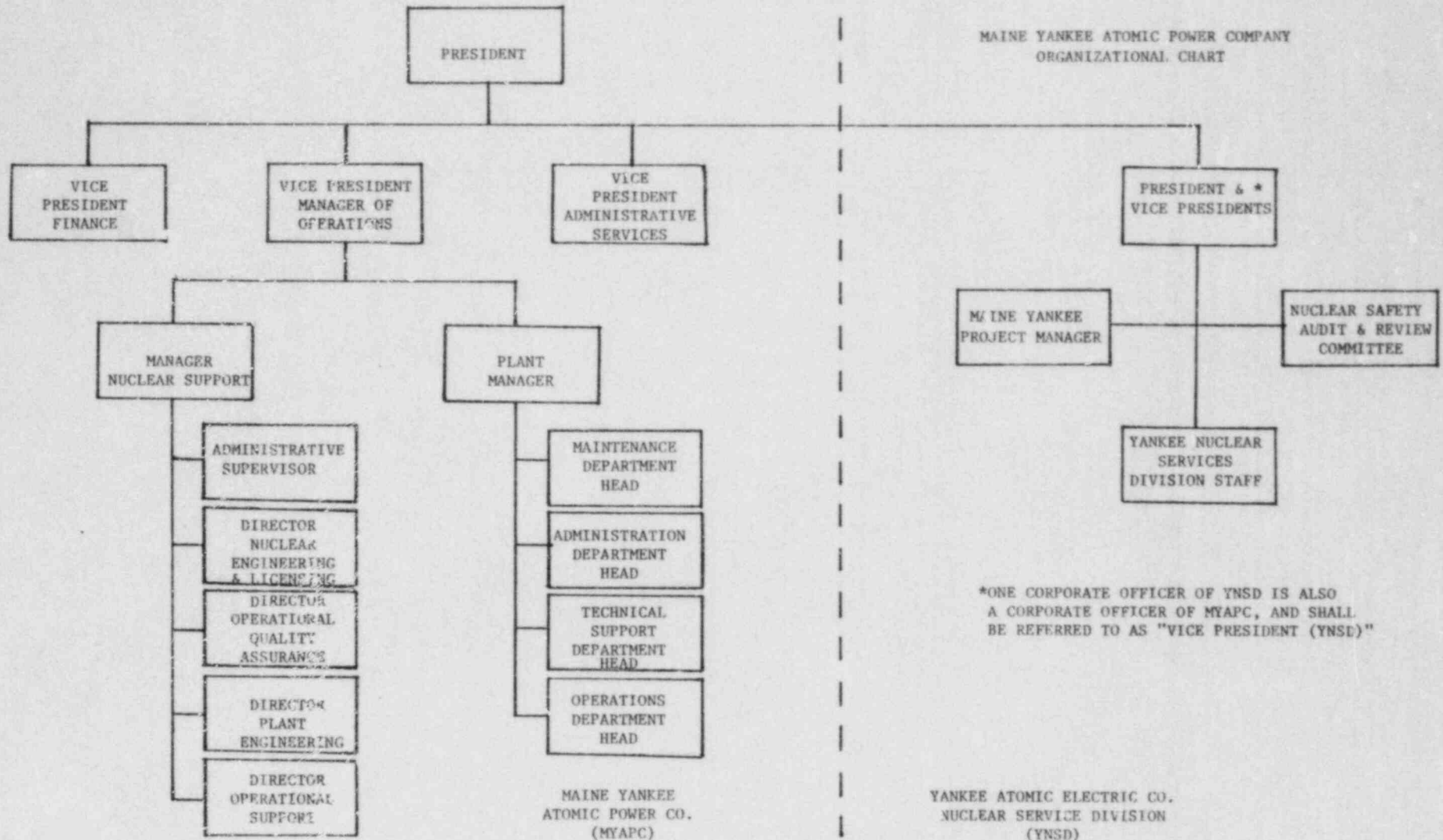
1. Plant Operations Review Committee

See Section 5.5, "Review and Audit" of Technical Specifications to the Operating License DPR-36.

2. Nuclear Safety Audit and Review Committee

See Section 5.5, "Review and Audit" of Technical Specifications to the Operating License DPR-36.

MAINE YANKEE ATOMIC POWER COMPANY
ORGANIZATIONAL CHART



*ONE CORPORATE OFFICER OF YNSD IS ALSO A CORPORATE OFFICER OF MYAPC, AND SHALL BE REFERRED TO AS "VICE PRESIDENT (YNSD)"

YANKEE ATOMIC ELECTRIC CO.
NUCLEAR SERVICE DIVISION
(YNSD)

REV. 0

FIGURE 1



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II. QUALITY ASSURANCE PROGRAM

A. SCOPE

The Quality Assurance Program provides control over activities affecting the quality of identified structures, systems and components, to an extent consistent with their importance to safety. The program takes into account the need for special controls, processes, equipment, tools, and skills to attain the required quality and the need for verification of quality by inspections, evaluations or tests.

B. RESPONSIBILITIES

Compliance with the requirements of the Operational Quality Assurance Program is the responsibility of all personnel involved with activities affecting operational safety. Individuals responsible for establishing and executing the Operational Quality Assurance Program are delineated in Section I, "Organization", of the program. Operational Quality Assurance shall regularly review the status and adequacy of the quality assurance program.

C. IMPLEMENTATION

Establishment of an effective Operational Quality Assurance Program is assured through consideration of and conformance, where applicable, with the below listed ANSI Standards and federal documents. Implementation of this program is assured through Quality Assurance procedures derived from Quality Assurance policies, goals and objectives.

1. Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants
- * 2. ANSI N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants
3. ANSI N45.2-1971, Quality Assurance Program Requirements for Nuclear Power Plants
4. ANSI N45.2.1-1973, Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants
- * 5. ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants
- * 6. ANSI N45.2.3-1973, Housekeeping During the Construction Phase of Nuclear Power Plants



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7. ANSI N45.2.4-1972, Installation, Inspection and Testing Requirements for Instrumentation and Electric Equipment During the Construction of Nuclear Power Generating Plants
8. ANSI N45.2.5-1974, Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants
9. ANSI N45.2.6-1973, Qualification of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants
10. ANSI N45.2.8-1975, Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants
11. ANSI N45.2.9-1974, Requirements for Collection, Storage and Maintenance of Quality Assurance Records for Nuclear Power Plants
- * 12. ANSI N45.2.10-1973, Quality Assurance Terms and Definitions
13. ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants
- * 14. ANSI N45.2.12, Draft 4, Revision 2, (January 1, 1976), Requirements for Auditing of Quality Assurance Program for Nuclear Power Plants
15. ANSI N45.2.13-1976, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants
16. ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel
17. ANSI N18.17-1973, Industrial Security for Nuclear Power Plants
18. ANSI N101.4-1972, Quality Assurance for Protective Coatings Applied to Nuclear Facilities
19. Regulatory Guide 1.8, Revision 1, (September, 1975) Personnel Selection and Training (Endorses ANSI N18.1-1971)
20. Regulatory Guide 1.30, August 11, 1972, Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment (Endorses ANSI N45.2.4-1972)



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21. Regulatory Guide 1.37, March 16, 1973, Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants (Endorses ANSI N45.2.1-1973)
22. Regulatory Guide 1.38, March 16, 1973, Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants (Endorses ANSI N45.2.2-1972)
23. Regulatory Guide 1.39, March 16, 1973, Housekeeping Requirements for Water-Cooled Nuclear Power Plants (Endorses ANSI N45.2.3-1973)
24. Regulatory Guide 1.54, June, 1973, Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants (Endorses ANSI N101. 4-1972)
25. Regulatory Guide 1.58, August 1973, Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel (Endorses ANSI N45.2.6-1973)
26. Regulatory Guide 1.64, Revision 1, (February, 1975), Quality Assurance Requirements for the Design of Nuclear Power Plants (Endorses ANSI N45.2.11-1974)
27. Regulatory Guide 1.74, February, 1974, Quality Assurance Terms and Definitions (Endorses ANS N45.2.10-1973)
28. Regulatory Guide 1.88, August, 1974, Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records (Endorses ANSI N45.2.9-1974)
29. Regulatory Guide 1.94, Revision 1 (April, 1976), Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants (Endorses ANSI N45.2.5-1974)

- NOTES:
- 1) The plant Technical Specifications shall be the governing document when determining requirements to be imposed in all areas which are addressed in both technical specifications and the above noted guides and standards.
 - 2) Revisions to the above listed documents will be considered for applicability to the Maine Yankee Operational Quality Assurance Program upon written direction thereof by the Nuclear Regulatory Commission - Office of Nuclear Reactor Regulations - Quality Assurance Branch.



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- 3) ANSI Standard N18.7-1976 is the endorsing document for all other above referenced ANSI Standards. All such endorsed ANSI Standards will be implemented to the degree of applicability indicated in ANSI N18.7-1976.
- 4) This Program shall be applicable to those activities requiring quality assurance which occur commencing 90 days after acceptance of the Program by the Nuclear Regulatory Commission.
- 5) Programmatic and organizational changes (other than those editorial in nature) made to Section I and II, respectively shall require Nuclear Regulatory Commission notification: programmatic changes prior to implementation and organizational changes within 30 days following the effective date of change.

*Exceptions and alternatives to the provisions contained in this Standard/Guide are detailed in Appendix B.

D. MANAGEMENT EVALUATION

The Vice President, YNSD, directs a thorough evaluation of the established Operational Quality Assurance Program by assigning the Nuclear Safety Audit and Review Committee the task of reviewing for compliance with and evaluating the effectiveness of the quality assurance program.

E. TRAINING

1. The Plant Manager is responsible for the indoctrination and training of plant staff personnel performing activities affecting operations or requiring quality assurance, and for ensuring that, where required by the Technical Specifications, operators are formally licensed or qualified.
2. The Manager of Nuclear Support is responsible for the indoctrination and training of Maine Yankee personnel other than MY plant staff personnel performing activities affecting operations or requiring quality assurance.
3. The indoctrination and training programs shall provide the following:
 - a. Instruction as to the purpose, scope, and implementation of quality assurance manuals, instructions, and procedures.



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- b. Training and qualification in the principles and techniques of the activity being performed.
 - c. Maintenance of personnel proficiency by retraining, reexamining, and/or recertifying.
 - d. Documentation of the training sessions including content, attendance, dates and results.
4. The Vice President-Yankee Nuclear Services Division is responsible for the indoctrination and training of YNSD personnel, to an approved training program, when performing activities affecting operations or requiring quality assurance.



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III. DESIGN CONTROL

A. SCOPE

This section of the Operational Quality Assurance Program establishes measures to assure that the design of and changes to structures, systems, and components covered by the Operational Quality Assurance Program are controlled.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Providing for Surveillance of the implementation of design control.
 - b. Review of engineering drawings and specifications to assure that appropriate design control practices, checks, and reviews are included.
 - c. Review of design bases for inclusion of quality requirements.
2. The Plant Engineering Department shall be responsible for:
 - a. The design and control of design activities (including design interfaces) for the change of structures, systems, or components including the requirement for independent review.
 - b. Identification, documentation, and control of deviations from specified design requirements and/or quality standards.
 - c. Delineation of acceptance criteria for inspections and tests.
3. The Plant Operations Review Committee shall be responsible for:
 - a. Review of all proposed plant design changes and recommending their approval or disapproval to the Plant Manager.
 - b. Determination of whether proposed changes involve unreviewed safety questions.
4. The Plant Manager shall be responsible for:
 - a. Review of the recommendations of the Plant Operations Review Committee.



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- b. Review and approval of proposed plant changes.
- 5. The Nuclear Safety Audit and Review Committee shall be responsible for the review of design changes.
- 6. The Yankee Nuclear Services Division shall be responsible for:
 - a. Establishment of approved policy for processing engineering design changes.
 - b. Independent engineering review of proposed design changes to verify the adequacy of designs and to assure the quality and consistency with safety and licensing requirements.

C. IMPLEMENTATION

- 1. Satisfaction of this criterion shall be assured through the implementation of the Maine Yankee and Yankee Nuclear Services Division actions listed below:
 - a. Correct translation of applicable regulatory requirements and design bases into specifications, drawings and written documents.
 - b. Application of suitable design controls to such activities as reactor physics; seismic, stress, thermal, hydraulic, radiation, and accident analyses; compatibility of materials; and accessibility for inservice inspection, maintenance and repair.
 - c. Design reviews to assure that design characteristics can be controlled, inspected and tested.
 - d. Performance of proper selection and accomplishment of design verification or checking process such as design reviews, alternate calculations, qualification testing or test programs. When a test program is used to verify the adequacy of a design, a qualification test of a prototype unit under the most adverse design conditions shall be used.
 - e. Subjection of design and specification changes to the same design controls and approvals that were applicable to the original design unless designated in writing to another responsible organization.
 - f. Documentation of errors and deficiencies in the design process that adversely affect safety classified structures, systems, and components; performance of corrective action to preclude repetition.



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- g. Review of standard "off the shelf" commercial or previously approved materials, parts, and equipment that are essential to the safety functions of structures, systems, and components, for suitability of application prior to selection.
- h. Selection of suitable materials, parts, equipment, and processes for safety classified structures, systems, and components.



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IV. PROCUREMENT DOCUMENT CONTROL

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures necessary to assure that applicable requirements necessary to assure adequate quality, are suitably included or referenced in the documents for procurement of material, equipment and services.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Surveillance and/or audit of procurement document control, including the preparation, review, and approval of purchase requests for material, equipment, and services covered by the Operational Quality Assurance Program.
 - b. Review of procurement documents initiated by Maine Yankee to assure that applicable requirements necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services.
2. Maine Yankee shall be responsible for:
 - a. The preparation, review, issue, and control of purchase documents.
 - b. Preparation of details as to how purchase documents are prepared, reviewed, approved, issued, and controlled.
3. The Plant Engineering Department shall be responsible for:
 - a. Preparation of engineering specifications which detail the technical and quality requirements for material, equipment and services.
 - b. Providing technical and quality requirements for material, equipment, and service purchases.

C. IMPLEMENTATION

1. Satisfaction of the criterion shall be assured through the implementation of the Maine Yankee actions listed below:
 - a. Documentation of the review and approval of procurement documents prior to release and availability of this documentation for verification.



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- b. Identification of the vendor's quality assurance requirements applicable to the items or services procured.
- c. Identification in the procurement documents of the documentation to be prepared, maintained, and/or submitted to the purchaser prior to use, such as:
 - 1. drawings, specifications, procedures
 - 2. inspection and fabrication plans
 - 3. inspection and test records
 - 4. personnel and procedure qualifications
 - 5. chemical and physical test results of material
 - 6. the company's right of access to the vendor's facilities and records for surveillance to procurement specifications.
- d. Review and approval of changes and revisions to procurement documents at least equivalent to those for the original document.
- e. Control of procurement documents for spare and replacement parts at least equivalent to that used for the original equipment.



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V. INSTRUCTIONS, PROCEDURES, AND DRAWINGS

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures for prescribing and accomplishing activities requiring quality assurance in accordance with approved drawings, instructions, or procedures.

B. RESPONSIBILITIES

Persons preparing and approving documents are responsible for assuring that specifications, instructions, procedures and drawings include appropriate quantitative or qualitative acceptance criteria for determining that activities have been satisfactorily accomplished; assuring that the applicable criteria of 10CFR50 Appendix B and/or ANSI N18.7 are specified; and assuring that the documents are kept current. In addition, the following departments have the distinct responsibilities delineated below.

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Providing for surveillance of instructions, procedures, and drawings.
 - b. Review and approval of all Plant Operational Quality Assurance procedures.
2. Maine Yankee shall be responsible for the preparation, review, approval, maintenance, and implementation of all instructions and procedures associated with Maine Yankee activities.
3. The Yankee Nuclear Services Division shall be responsible for:
 - a. Updating and control of original drawings and special process procedures and distribution of copies thereof.
4. The Plant Operations Review Committee shall be responsible for reviewing procedures affecting nuclear safety prior to their approval by the Plant Manager.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the Maine Yankee and/or Yankee Nuclear Services Division actions listed below:



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- a. Establishment of provisions which clearly delineate the sequence of actions to be accomplished in the preparation, review, approval, and control of instructions, procedures, and drawings.
- b. Review of inspection plans; test, calibration, special process, maintenance and repair procedures; drawings and specifications; and changes thereto.



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VI. DOCUMENT CONTROL

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures for controlling documents, including revision thereto, which affect quality activities.

B. RESPONSIBILITIES

1. All participating departments shall establish document control measures which provide for the following:
 - a. Identification of departments responsible for preparation, review, approval, and control of documents.
 - b. Identification of documentation to be used in performing activity.
 - c. Coordination and control of interface documents.
 - d. Establishment of distribution lists.
 - e. Action to be taken for obsolete or superseded documents.

In addition, the following departments have the unique responsibilities delineated below:

2. The Operational Quality Assurance Department shall be responsible for surveillance and/or audit of document control systems at Maine Yankee and vendors.
3. Maine Yankee shall be responsible for:
 - a. Controlling the issuance of operating, maintenance, repair, refueling, and change documents.
 - b. Distribution and maintenance of all approved and/or revised documents assuring quality at the location where the activity is performed.
 - c. A system of review, approval and distribution of Maine Yankee Quality Assurance documents.
4. The Yankee Nuclear Services Division shall be responsible for:
 - a. Controlling the issuance of engineering drawings, General Specifications, welding and nondestructive examination procedures.



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- b. Revision and distribution of welding and nondestructive examination procedures.
 - c. Maintenance and distribution of General Specifications and controlled drawings.
5. The Vice President - Manager of Operations shall be responsible for establishing the means for the control and distribution of the Operational Quality Assurance Program, and revisions thereto.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the Maine Yankee and/or Yankee Nuclear Services Division actions listed below:
 - a. Review and approval of document changes by the same organizations that performed the original review and approval or by other responsible organizations delegated by Maine Yankee.
 - b. Inclusion of approved changes in instructions, drawings, and other applicable documents prior to placing the system in operating status.
 - c. Provision of availability of documents at the location where the activity is to be performed prior to commencing the work.
 - d. Establishment, revision, and distribution of a master list or equivalent to identify the current revision number of instruction, specifications, drawings, or other quality assurance documents.
 - e. Control of documents identified as follows:
 1. Design specifications
 2. Design, manufacturing, construction, and installation drawings
 3. Procurement documents
 4. Operational Quality Assurance Program, maintenance, and operating procedures
 5. Manufacturing, inspection and test instructions



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6. Test documents
7. Design change requests
8. Nonconformance reports



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VII. CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

A. SCOPE

This section of the Operational Quality Assurance Program establishes measures to assure that purchased material, equipment and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Provide for evaluation of vendor quality assurance programs.
 - b. Provide for maintenance of a listing of qualified vendors based upon (a).
 - c. Surveillance of plant or vendor material and/or services control.
 - d. Receipt inspection of material and equipment.
2. Maine Yankee shall be responsible for:
 - a. Control of material and equipment.
 - b. Evaluation of purchased services during and/or after completion of the service.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Evaluation of vendors based on one or more of the following:
 1. Vendor's capability to comply with the applicable criteria of 10CFR50 Appendix B and/or ANSI N18.7.
 2. Review of vendor's previous records and performances.
 3. Surveillance of vendor's facilities/services and QA program to determine his ability to produce the item to the purchase specifications.



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- b. Documentation and maintenance of the results of vendor evaluations.
- c. Planned vendor surveillances which provide for:
 - 1. Specification of processes to be witnessed or verified, the surveillance method and documentation required, and personnel responsible for performing the surveillance.
 - 2. Assurance that the vendor complies with the quality requirements by surveillance of in-process work.
- d. Transfer of the following records from the vendor to Maine Yankee:
 - 1. Documentation that identifies the purchased material and the specific procurement requirements met by the item.
 - 2. Documentation that identifies any deviation from procurement requirements including a description of those deviations dispositioned "accept as is" or "repair".
- e. Review and acceptance of vendor documents by a responsible quality assurance individual.
- f. Receipt inspection of vendor furnished material to assure:
 - 1. Material is identified and conforms with receiving documentation identification.
 - 2. Material and documentation are inspected in accordance with predetermined instructions and are determined acceptable prior to use.
 - 3. Inspection records or certificates of conformance atesting to material acceptability are on-site prior to use.
 - 4. Items are identified as to their inspection status prior to release for controlled storage, installation or further work.
- g. Evaluation of the vendor's effectiveness to control quality is performed at intervals consistent with the importance, complexity and quality of the item.



Title: Section VIII. Identification & Control
of Mat'l, Parts, & Components
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VIII. IDENTIFICATION AND CONTROL OF MATERIAL, PARTS, AND COMPONENTS

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures for identification and control necessary to prevent the use of incorrect or defective material, parts, and components.

B. RESPONSIBILITIES

1. The Operational Quality Assurance department shall be responsible for:
 - a. Surveillance, audit and/or inspection of the control and issuance of materials, parts, and components covered by the Operational Quality Assurance Program.
 - b. Review of vendor Quality Assurance programs for traceability of materials through the use of heat number, part number, or serial number, either on the item or on records traceable to the items.
2. Maine Yankee shall be responsible for:
 - a. Preparation, review and approval of documents for the identification and control of materials, parts, and components.
 - b. Maintenance of traceability of materials, parts, and components received, stored, installed, and used at the Plant.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Traceability of the identification of materials and parts to the appropriate documentation such as drawings, specifications, purchase orders, manufacturing and inspection documents, deviation reports, and physical and chemical mill test reports.
 - b. Identification of the item in a location and with a method which does not affect its fit, function or quality.
 - c. Documented verification of correct identification of materials, parts, and components prior to release for use.



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IX. CONTROL OF SPECIAL PROCESSES

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures necessary to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel in accordance with applicable codes, standards, specifications, criteria and other special requirements.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Providing surveillance, audit and/or inspection of the control of special processes.
 - b. Providing performance and/or evaluation of certain nondestructive tests in accordance with Yankee Nuclear Services Division Welding and Nondestructive Examination Procedures".
 - c. Providing training, qualification, and requalification of Maine Yankee personnel in nondestructive testing (liquid penetrant examination).
 - d. Review of special process documents provided by vendors.
2. The Yankee Nuclear Services Division shall be responsible for:
 - a. Preparation of documents for welding, heat treating, and nondestructive examinations.
3. Maine Yankee shall be responsible for:
 - a. Assurance that maintenance and change work involving special processes are performed by qualified personnel in accordance with approved documents.
 - b. Control of material used in special processes by plant personnel.
 - c. Review and approval of special process documents provided by the vendor.



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C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of Maine Yankee and/or Yankee Nuclear Services Division actions listed below:
 - a. Qualification records of documents, equipment, and personnel connected with special processes in accordance with applicable codes, standards, and specifications.
 - b. Special processes accomplished in accordance with written process sheets or equivalent with recorded evidence of verification.
 - c. Maintenance and updating of qualification records of special process documents, equipment, and personnel.



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X. INPSECTION

A. SCOPE

This section of the Operational Quality Assurance Program establishes measures for inspection of activities requiring quality assurance to verify conformance with approved procedures, drawings, specification and instructions.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Review of engineering specifications for inclusion of inspection requirements and acceptance criteria.
 - b. Review of documentation pertinent to the Inservice Inspection Program.
 - c. Surveillance of inspection activities and personnel.
 - d. Incorporation of mandatory witness points for plant activities.
 - e. Incorporation of mandatory witness points for vendor/service group activities.
 - f. Writing and approving inspection instructions and check lists.
2. Maine Yankee shall be responsible for:
 - a. Assuring that activities requiring quality assurance meet predetermined requirements.
 - b. Providing qualified personnel and necessary equipment for examinations to assure quality work.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Independence of personnel performing the inspection from the personnel performing the activity being inspected.
 - b. Use of instruction or check lists which incorporate the details listed in Section XVII Item c.l.a.
 - c. Use of necessary drawings and specifications when performing inspection operations.



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- d. Inspection of repairs and replacements in accordance with the original design and inspection requirements or acceptable alternatives.
- e. Surveillance of processing methods, equipment, and personnel when direct inspection is not possible.
- f. Qualification of inspectors in accordance with applicable codes, standards, and company training programs; and maintenance of qualifications and certifications.
- g. Review of maintenance documents by qualified personnel knowledgeable in quality assurance to determine the need for inspection, identification of inspection personnel, and documenting inspection results.



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XI. TEST CONTROL

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures for a test program to demonstrate that structures, systems, and components will perform satisfactorily in service.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Providing surveillance of the control of the test program.
 - b. Surveillance of the documentation generated during the test program.
2. The Plant Engineering Department shall be responsible for:
 - a. Preparation or review of specifications, requirements, and acceptance criteria for testing following plant changes.
 - b. Development of test documents, performance of tests, and documentation, evaluation, and approval of test results.
3. The Plant shall be responsible for:
 - a. Provision of qualified personnel and calibrated equipment for testing.
4. The Plant Operations Review Committee shall review all proposed tests and experiments that affect nuclear safety.
5. The Nuclear Safety Audit and Review Committee shall be responsible for reviewing proposed tests or experiments not described in the safety analysis report which involve a change in the technical specifications or an unreviewed safety question as defined in section 50.59, 10CFR.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:



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- a. Assurance that changes, repairs, and replacements are tested in accordance with the original design and testing requirements or acceptable alternatives.
- b. Review of written test documents for incorporation or reference of the following:
 1. Requirements and acceptance limits contained in applicable design and procurement documents.
 2. Instructions for performing the test.
 3. Test prerequisites, such as:
 - a. Calibrated instrumentation
 - b. Adequate and appropriate equipment
 - c. Trained, qualified, and licensed/certified personnel
 - d. Completeness of item to be tested
 - e. Suitable and controlled environmental conditions
 - f. Provisions for data collection and storage
 4. Mandatory inspection hold points for witness by owner, contractor or inspector, when applicable.
 5. Acceptance and rejection criteria.
 6. Method of documenting test data and results.



Title: Section XII. Control of Measuring &
Test Equipment
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XII. CONTROL OF MEASURING AND TEST EQUIPMENT

A. SCOPE

This section of the Operational Quality Assurance Program established the measures for the control, calibration and periodic adjustments of tools, gages, instruments, and other measuring and test devices used to verify conformance to established requirements.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Surveillance and/or audit of the established program for the control of measuring and test equipment.
 - b. Review of the implementing documents for control of measuring and test equipment.
2. The Plant shall be responsible for:
 - a. Development of the implementing documents for control of measuring and test equipment including identification and calibration.
 - b. Provision of calibrated tools, gages and instruments necessary to perform required measurements and tests.
 - c. Maintenance of calibration records.
 - d. Preparation and review of specifications for measuring and test equipment, such that all applicable requirements are satisfied.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Identification and traceability of measuring and test equipment to the calibration test data.
 - b. Labelling or tagging of measuring and test equipment to indicate due date for calibration.



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- c. Calibration of measuring and test equipment at specified intervals based on required accuracy, purpose, degree of usage, stability characteristics, and other conditions affecting the measurement.
- d. Documentation of measures taken to determine the validity of previous inspections performed when measuring and test equipment is found to be out of calibration.
- e. Use of calibration standards having an uncertainty (error) equal to or better than the equipment being calibrated. Calibration standards limited by the "state-of-the-art" may have a greater acceptable uncertainty.
- f. Documentation and maintenance of the status of all items under the calibration system.
- g. Traceability of reference and transfer standards to nationally recognized standards; or, documentation of the basis for calibration where national standards are nonexistent.



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XIII. HANDLING, STORAGE AND SHIPPING

A. SCOPE

This section of the Operational Quality Assurance Program establishes measures to control the handling, storage, shipping, cleaning and preservation of material and equipment to prevent damage or deterioration.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Providing surveillance, audit and/or inspection of the handling, storage and shipping of materials, parts, and components.
 - b. Providing review of handling, storage, and shipping documents.
 - c. Providing review of Engineering and Plant specifications to assure that proper handling, storage, and shipping requirements have been specified.
2. The Plant shall be responsible for:
 - a. Development of the implementing documents for handling, storage and shipping of materials and equipment.
 - b. Provisions of suitable facilities and equipment for handling, storage, and shipping of materials.
 - c. Inspection and test of special handling tools and equipment.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Specification and accomplishment of special handling, preservation, storage, cleaning, packaging, and shipping requirements by qualified individuals in accordance with predetermined work and inspection instructions.
 - b. Preparation of instructions in accordance with design and specification requirements which control the cleaning, handling, storage, packaging, shipping and preservation of safety classified materials, components and systems to preclude damage, loss or deterioration by environmental conditions such as temperature or humidity.



Title: Section XIV. Inspection, Test & Operating Status
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XIV. INSPECTION, TEST AND OPERATING STATUS

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures for indicating the status of items undergoing inspections and tests (via tags, labels, etc.), to prevent the unintentional bypass of required tests. In addition, this section establishes measures for indicating the operating status of components and systems to prevent their inadvertent operation.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for the surveillance of inspection, test and operational status of components and systems and their repair.
2. The Plant shall be responsible for:
 - a. Ensuring indication of the status of operating equipment or systems to be removed from service for maintenance, test, inspection, repair, or change.
 - b. Designation of personnel who are responsible for directing the status change of equipment and systems.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Notification of affected organizations for changes in the inspection, test and operating status of structures, systems, and components.
 - b. Procedural control to prevent the inadvertent bypassing of required inspections, tests and other critical operations.



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XV. NONCONFORMING MATERIALS, PARTS, AND COMPONENTS

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures to control materials, parts, or components which do not conform to requirements, in order to prevent their inadvertent use.

B. RESPONSIBILITIES

1. The Vice President - Manager of Operations shall be responsible for:
 - a. Review and approval of all nonconformance reports.
2. The Operational Quality Assurance Department shall be responsible for:
 - a. Surveillance of the control, evaluation, and disposition of nonconforming material, parts and components.
 - b. Review of nonconformance reports.
 - c. Surveillance for repetitive nonconforming materials.
 - d. Establishment of feedback system between Maine Yankee and vendor representatives in regard to nonconforming material.
3. The Plant Engineering Department shall be responsible for:
 - a. Review of nonconforming items which cannot be corrected by vendor action.
 - b. Preparation or approval of implementing documents for repair and/or rework of nonconforming items.
 - c. Preparation of documents to be followed in the review and resolution of nonconforming items, services, or activities.
4. The Plant shall be responsible for:
 - a. Writing implementation documents for the identification, documentation, and corrective action for all material, installation, testing, operation, and/or surveillance nonconformances.
 - b. Establishment of measures to provide for the documented control of nonconforming materials, parts, and components.



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C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Identification, disposition, inspection and segregation of nonconforming items.
 - b. Identification of those individuals or groups delegated the responsibility and authority for the disposition and written approval of nonconforming items.
 - c. Inspection and test of reworked or repaired items which require reinspection and retest to original methods or methods equivalent thereto.
 - d. Inclusion of nonconformance reports dispositioned "accept as is" or "repair" as part of the inspection records furnished to the plant.
 - e. Periodic analysis of nonconformance reports to show quality trends with the results reported to management for review and assessment.
2. The identification, description, disposition, inspection and signature approval of the disposition for nonconformance shall be documented in a nonconformance report.



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XVI. CORRECTIVE ACTION

A. SCOPE

This section of the Operational Quality Assurance Program establishes measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Surveillance and/or audit of plant activities involving the identification, review and correction of conditions adverse to quality.
 - b. Surveillance and/or review of documentation of corrective action.
2. Maine Yankee shall be responsible for:
 - a. Identification of causes of conditions adverse to quality.
 - b. Preparation of recommendations to prevent reoccurrence of a deficiency.
 - c. Implementation of the corrective action.
 - d. Documentation of corrective action taken.
3. The Plant Engineering Department shall be responsible for:
 - a. Review of conditions adverse to quality which involve design deficiencies to determine the cause of the condition.
 - b. Recommendations or corrective action to preclude repetition of design deficiencies.
4. The Plant Operations Review Committee shall be responsible for:
 - a. Review of conditions adverse to quality and recommending corrective action.
 - b. Recommendations involving repetition of operating deficiencies.



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C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Initiation of corrective action following the determination of a condition adverse to quality to preclude recurrence.
 - b. Follow-up reviews to verify proper implementation of corrective actions and to close out the corrective action documentation.
 - c. Reporting of significant conditions adverse to quality, the cause of the conditions, and the correction action implemented to the cognizant levels of management for review and assessment.



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XVII. QUALITY ASSURANCE RECORDS

A. SCOPE

1. This section of the Operational Quality Assurance Program establishes the measures for maintenance of records which provide documentary evidence of the quality of items and the activities affecting quality. Requirements shall be established for identification, transmittal, retrievability and retention of quality assurance records including duration, location, protection and assigned responsibility.
2. The quality assurance records shall include plant history; operating logs; principal maintenance; design change activities; reportable occurrences; nonconformance reports; results of reviews, inspection, tests, audits and material analyses; monitoring of work performance; qualification of personnel, documents and equipment; drawings; specifications; procurement documents; calibration documents and reports; and corrective action reports.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Surveillance and/or audit of quality assurance record review, control and retention.
 - b. Maintenance of audit, vendor evaluation, surveillance and inspection records of quality assurance activities generated by the Operational Quality Assurance Department personnel or their designates.
2. Maine Yankee shall be responsible for:
 - a. Writing implementation documents for the establishment and maintenance of Operational Quality Assurance records.
 - b. Designating individuals and establishing requirements for the control of plant design, procurement, and operational records involving quality assurance.
 - c. Maintenance of qualification/certification records for Maine Yankee personnel.
 - d. Provision of facilities to prevent deterioration or loss of documentation.



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- e. Provision of a system for the review, approval and retention of plant prepared documents such as reportable occurrences, technical reports, required records and the meeting minutes of official committees.
- f. Control and distribution of the Operational Quality Assurance Program and revisions thereto.

C. IMPLEMENTATION

- 1. Satisfaction of this criterion shall be assured through the implementation of the actions listed below:
 - a. Specifying the details required for inspection and test records including the following as applicable:
 - 1) Description of the type of observation.
 - 2) Evidence of completion and verification of manufacturing, inspection, or test operations.
 - 3) The date and results of the inspection or test.
 - 4) Information related to conditions adverse to quality.
 - 5) Inspector or data recorder identification.
 - 6) Evidence as to the acceptability of the results.
 - b. Providing for record administration, receipt, storage, preservation, safekeeping, retrieval and final disposition.
 - c. Construction, location and security of record storage facilities to prevent destruction of the records by fire, flooding, theft, and deterioration by environmental conditions such as temperature or humidity. Duplicate records shall be stored in a separate remote location when the type of document is not included in the record storage facility.



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XVIII. AUDITS

A. SCOPE

This section of the Operational Quality Assurance Program establishes the measures for a comprehensive system of planned and documented audits to verify compliance with all aspects of the Program and to assess the effectiveness of the Program.

B. RESPONSIBILITIES

1. The Operational Quality Assurance Department shall be responsible for:
 - a. Providing approved audit check lists for surveillance of activities encompassed by the 18 criteria of 10CFR50 Appendix B and ANSI N18.7.
 - b. Providing for training of audit personnel.
 - c. Scheduling and coordinating of the formal Internal Audit Program.
 - d. Review and approval of the implementing documents for Internal Audits.
 - e. Preparing information regarding the Internal Audit Program for review by the Nuclear Safety Audit and Review Committee.
 - f. Performing random informal surveillance of plant activities.
 - g. Provide for evaluations of vendors.
 - h. Identifying program discrepancies and deficiencies.
 - i. To verify correction of discrepancies discovered during audits.
 - j. Making recommendations to preclude possible audit discrepancy repetition.
2. The Manager - Nuclear Support shall be responsible for evaluation of and recommend corrective action for Internal Audit discrepancies.
3. The Plant shall be responsible for:



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- a. Documentation of the discrepancy response concerning any outstanding item resulting from an audit at the plant.
 - b. Implementation of corrective action to be taken as agreed upon by the Manager - Nuclear Support.
4. The Nuclear Safety Audit and Review Committee shall be responsible for:
- a. Review of the Operational Quality Assurance Program to determine its overall effectiveness.
 - b. Reporting results of Program reviews and recommendations resulting therefrom to Maine Yankee Vice President/Manager of Operations and YNSD Vice President.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of Maine Yankee documents.
2. The implementing documents shall provide for the following:
 - a. Documentation of audit results and review with management having responsibility in the area audited.
 - b. Necessary action to be taken by responsible management to correct deficiencies revealed by the audit.
 - c. Reaudit of deficient areas until corrections have been accomplished to preclude recurrence of the deficiencies.
 - d. Inclusion of an objective evaluation of quality-related practices, procedures, instructions and the effectiveness of implementation in the audit.
 - e. Inclusion of an objective evaluation of work areas, activities, processes and items and the review of documentation in the audit.
 - f. Performance of audits in the below listed areas where the requirements of Appendix B to 10CFR Part 50 and ANSI N18.7 are being implemented.
 - 1) Operation, maintenance and repairs.
 - 2) The preparation, review, approval, and control of designs, specifications, procurement documents, instruction, procedures, and drawings.



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- 3) Receiving and plant inspections.
 - 4) Indoctrination and training programs.
 - 5) Implementation of operating and test procedures.
 - 6) Calibration of measuring and test equipment.
 - 7) Security
 - 8) Emergency Plan
 - 9) Health Physics
 - 10) Corrective Action
- g. Scheduling of audits regularly on the basis of the status and safety importance of the activities being performed.



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QUALIFICATION REQUIREMENTS FOR THE
DIRECTOR, OPERATIONAL QUALITY ASSURANCE DEPARTMENT

The Director, Operational Quality Assurance Department must meet the below listed qualification requirements:

1. Have a Bachelor's degree in Science or Engineering, or the equivalent in practical experience.
2. Must have developed a high level of competence in the field of quality assurance or related technical areas associated with nuclear stations.
3. Must be innovative and have the ability to plan an effective overall quality assurance program for the Company.
4. Must have the ability to effectively coordinate the implementation, monitoring and modification of the quality assurance program.
5. Must exhibit qualities of leadership and communications ability, both oral and written.



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APPENDIX B
(Exceptions)

The sub-categories of this Appendix summarize the exceptions noted in Section II of the Maine Yankee Operational Quality Assurance Program.

<u>Appendix B Sub-Category</u>	<u>Standard/Guide</u>	<u>Title</u>
B-1	ANSI N18.7-1976	Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants
B-2	ANSI N45.2.3-1973	Housekeeping During the Construction Phase of Nuclear Power Plants
B-3	ANSI N45.2.10-1973	Quality Assurance Terms and Definitions
B-4	ANSI N45.2.12 (Draft 4 Revision 2-1976)	Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants
B-5	ANSI N45.2.2-1972	Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants



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ANSI N18.7 - 1976, Administrative Controls and Quality Assurance for the Phase
of Nuclear Power Plants

EXCEPTION:

The following exception is taken by Maine Yankee.

ANSI standards not referenced in ANSI N18.7-1976, but which are referenced in an ANSI standard endorsed by N18.7-1976 shall not be considered as applicable to the Maine Yankee Operational Quality Assurance Program.

ALTERNATIVE:

Maine Yankee may use the noted standards as guides, as necessary.



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ANSI N45.2.3-1973, Housekeeping During the Construcion Phase of Nuclear Power Plants

A. EXCEPTION:

Subsection 2.1 - Planning

Maine Yankee takes exception to the five-zone requirements specified in the subject standard.

ALTERNATIVE:

Maine Yankee shall establish as a minimum a three-zone program as follows:

Zone III

Zone III criteria shall be applied to major portions of the reactor coolant system which are opened for inspection, maintenance or repair.

1. Access control over personnel shall be required.
2. Cleanliness shall be maintained, commensurate with the work being performed, so as to preclude the entry of foreign material to the Reactor Coolant System.
3. A documented cleanliness inspection shall be performed immediately prior to closure.

NOTE: The Zone III requirements may be expanded for certain maintenance/repair activities if deemed appropriate by plant management. In such instances applicable sections of Zones I & II shall be specified.

Zone IV

Zone IV criteria shall be applied to the radiation control areas of the plant.

1. Standard janitorial and work practices shall be utilized to maintain a level of cleanliness commensurate with company policy in the areas of Housekeeping, Plant and Personnel Safety and Fire Protection.
2. Additional housekeeping requirements shall be implemented as required for the control of radioactive contamination.
3. Smoking and eating shall be controlled consistent with good health physics practices and to maintain cleanliness.



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ANSI N45.2.3-1973 (Cont.)

Zone V

Zone V criteria shall be applied to the remainder of the plant.

1. Standard janitorial and work practices shall be utilized to maintain a level of cleanliness commensurate with company policy in the areas of Housekeeping, Plant and Personnel Safety and Fire Protection.

B. EXCEPTION:

Subsection 3.2 - Control of Facilities

Maine Yankee takes exception to the control of tools, equipment, materials and supplies used in Zone III.

ALTERNATIVE:

Maine Yankee shall verify control for Zone III as indicated in Exception A of this sub-category.



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ANSI N45.2.10-1973, Quality Assurance Terms and Definitions

EXCEPTION:

Subsection 2 - Terms and Definitions

Maine Yankee takes exception to the definitions of "Certificate of Conformance" and "Certificate of Compliance".

ALTERNATIVE:

Maine Yankee shall reverse the definitions of the above terms so our Program will be in compliance with the implied definitions in the ASME B&PV Code and Maine Yankee specifications.



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ANSI N45.2.12 Draft 4, Rev. 2-1976, Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants

EXCEPTION:

Subsection 4.2.2 Team Selection

Maine Yankee takes exception to the requirement for a "Lead Auditor".

ALTERNATIVE:

Team Selection - In selecting personnel for auditing assignments, consideration shall be given to special abilities, specialized technical training, prior pertinent experience, personal characteristics, and education. One or more auditors comprise an audit team. Auditor responsibilities include establishing the pace of the audit, assuring communications with the organization being audited, participation in the audit performance, and preparation and issuance of reports.



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ANSI N45.2.2 - 1972, Packaging, Shipping, Receiving, Storage & Handling of
Items for Nuclear Power Plants

A. EXCEPTION:

Subsection 3.7.1 & A3.7.1 - Containers

Maine Yankee takes exception to the specific requirements for containers.

ALTERNATIVE:

Containers shall be of suitable construction to assure material is received undamaged.

JUSTIFICATION:

Containers shipped by closed carrier, stored inside and not subjected to a wet environment do not require weather resistant fiberboard, therefore, this is an unnecessary expense. Additionally, numerous vendors utilize shipping containers that do not comply with the specific requirements of this section, i.e., flaps overlap. The acceptance criteria for a shipping container should be established based on the capability of the container to maintain the component/material in a safe condition. Technology has advanced beyond the standard.

B. EXCEPTION:

Subsection 3.7.2 - Crates and Skids

Maine Yankee takes exception to the requirement that skids and runners shall be used on boxes with a gross weight of 100 pounds or more.

ALTERNATIVE:

Skids or runners shall be used on boxes with a gross weight of 100 pounds or more if practical.

JUSTIFICATION:

Storage methods and container design frequently are such that runners or skids are not feasible.



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ANSI N45.2.2 (Cont.)

C. EXCEPTION:

Subsection 5.2.1 - Shipping Damage Inspection

Maine Yankee takes exception to the requirement that a preliminary visual inspection or examination be performed prior to unloading.

ALTERNATIVE:

Maine Yankee shall perform those required inspections after unloading. In special instances, pre-unloading inspections shall be performed.

JUSTIFICATION:

Post unloading inspection is adequate to determine any damage that may have been incurred during shipping and handling.

D. EXCEPTION:

Subsection 5.2.2 - Item Inspection

Maine Yankee takes exception to the requirement, that "The inspections shall be performed in an area equivalent to the level of storage requirements for the item".

ALTERNATIVE:

Maine Yankee shall perform receiving inspection in a manner and in an environment which does not endanger the requisite quality of the item; however, receiving area environmental controls may be less stringent than storage environmental controls for that item. When inspections are performed in receiving areas with environmental controls less stringent than storage area environmental controls, a time limit shall be established on a basis for retention of items in the receiving area. Retention time shall be such that deterioration is prevented and applicable manufacturer recommendations are addressed.

JUSTIFICATION:

Receipt inspection activities are for a much shorter duration and therefore should not be subjected to the same stringent requirements as required for storage.



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ANSI N45.2.2 (Cont.)

E. EXCEPTION:

Subsection 5.2.3 - Special Inspection

Maine Yankee takes exception to attaching special inspection procedures to the item or container.

ALTERNATIVE:

Special inspection procedures shall be readily available to personnel performing inspections.

JUSTIFICATION:

Procedures are subject to less abuse and more stringent controls when maintained on file and not attached to the item. Inspection status is maintained by tagging and procedure control.

F. EXCEPTION:

Appendix A-3 Subsection A3.5.1(1) - Caps & Plugs

Maine Yankee takes exception to the requirement that non-metallic plugs and caps shall be brightly colored.

ALTERNATIVE:

Non-metallic plugs and caps shall be of a contrasting color.

JUSTIFICATION:

The purpose of utilizing brightly colored plugs and caps is to assist in assuring obstructions are not inadvertently placed in operating components or systems. By using plugs and caps of a contrasting color this objective can be achieved.

G. EXCEPTION:

Appendix A-3 Subsection A3.9(1) - Second Group, Markings

Maine Yankee takes exception to the requirement that container markings shall appear on a minimum of two sides.

ALTERNATIVE:

Containers shall be adequately marked to provide identification and retrievability.



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ANSI N45.2.2 (Cont.)

JUSTIFICATION:

Containers are tagged to provide identification and inspection status. Employment of two tags on small containers adds bulk and confusion and does not provide for better identification or traceability.

H. EXCEPTION:

Appendix A-3, Subsection A.3.9(4) - Second Group, Marking

Maine Yankee takes exception to the requirement that container markings shall be no less than 3/4" high container permitting.

ALTERNATIVE:

Container markings shall be of a size which permits easy recognition.

JUSTIFICATION:

Markings were intended to provide identification and instructions. The criteria should be that the markings clearly provide the same.

I. EXCEPTION:

Appendix A-3 Subsection A.3.9(6) - Second Group, Marking

Maine Yankee takes exception to the information required for container marking.

ALTERNATIVE:

Marking shall be adequate in each case to provide identification, traceability and instructions for special handling, as applicable.

JUSTIFICATION:

The information required is excessive. Cluttering a container with excessive markings only reduces the main objectives, maintaining identification and establishing special controls.



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MAINE YANKEE

CLASSIFICATION OF STRUCTURES, COMPONENTS AND SYSTEMS

SAFETY
CLASS

I. STRUCTURES

Vapor Container

2

II. ELECTRICAL SYSTEMS AND COMPONENTS

Electrical and Instrumentation systems and components designed in accordance with IEEE Standard 279, "Criteria for Protection Systems for Nuclear Power Generating Stations" and IEEE Standard 308, "Criteria for Class IE Electric Systems for Nuclear Power Generating Stations" have been classified as safety class, and are listed below:

- A. 4160 Volt Switch gear (Engineered Safety Features Buses)
- B. 4160 - 480 Volt Transformers (Associated with Engineered Safety Features)
- C. 4000 and 460 Volt Motors (Associate with Engineered Safety Features)
- D. 480 Volt Switch gear (Engineered Safety Features Buses)
- E. 480 Volt Motor Control Centers (Associated with Engineered Safety Features)
- F. 125 Volt DC Batteries (Associated with Engineered Safety Features)
- G. Battery Chargers (Associated with Engineered Safety Features)
- H. Inverters, 125 Volt DC to 120 Volt AC (Vital Instrument Buses)
- I. Vital Instrument Bus Panels
- J. Regulated Instrument Buses Panels (240/120 Volts AC Single Phase)
- K. 125 Volt DC Power Panels (Associated with Engineered Safety Features)
- L. Transformers, dry type, 280-120/240 Volt (Associated with Regulated Instrument Buses)
- M. Cable Trays (Associated with Engineered Safety Features)
- N. Containment Penetration Assemblies
- O. Power Cables (Associated with Engineered Safety Features System)
- P. Instrumentation and Control Cables (Associated with Engineered Safety Feature System)
- Q. AC Control Room Lighting
- R. Diesel Generators
- S. Diesel Generator Control Panels
- T. Heat Tracing for Boric Acid Injection
- U. Reactor Protective Systems
- V. Engineered Safety Features Actuation Systems



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SECTION II NOTES:

1. For those electrical and instrumentation systems designated above, Quality Assurance electrical and instrumentation program requirements are applicable only to those portions of systems defined in Section IV as necessary to perform the system safety function.
2. Instrumentation components included within each instrumentation system include power supply, sensors, relays, wiring and final operating device (solenoid, relay, etc.) as necessary to perform the system safety function.
3. Electrical components included within each electrical system include power source, breaker, control circuit, cable, relaying and operating device (motor, solenoid, heater, relay, etc.) as necessary to perform the system safety function.
4. Certain components are excluded from the QA program requirements if they meet the criteria described in Section III.

III. ELECTRICAL AND INSTRUMENTATION SYSTEM COMPONENT EXCLUSION CRITERIA

1. Any component of an electrical or instrumentation system (Section II) is excluded from the QA Program requirements if it meets the following criteria:
 - a. A failure of the component by the electrical shorting, open circuiting, grounding or mechanical failure would not render the system incapable of performing its intended safety function
 - b. A failure of the fluid pressure boundary of the component would not render the system incapable of performing its intended safety function.
 - c. It is not used to operate or control a device required by Technical Specifications.
2. Small spare parts having no traceability, such as commercial off-the-shelf items, may be purchased as non-safety-related and then qualified for use in equipment requiring Quality Assurance. Examples of such items are resistors, capacitors, switches, indicators, coils, wire, connectors, solid state devices and miscellaneous hardware.



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IV. MECHANICAL SYSTEMS AND COMPONENTS

Mechanical systems and components have been nuclear safety classified in accordance with ANSI Standard N18.2, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants".

Instruments, controls, motors, sensors, etc. associated with the nuclear safety classified components which assist the components in performing a safety function are in the same safety class as the component to which they are associated except as noted in Section II above.

Corresponding component supports that provide a safety function are in the same safety class as the components for which they provide support.

Component safety class designations are listed in the attached Table C.1

V. OTHER ITEMS REQUIRING QUALITY ASSURANCE

1. Fuel Assemblies
2. Boric Acid
3. Diesel Fuel Oil
4. Weld Rod
5. Chemicals
 - a. Hydrogen
 - b. Nitrogen
 - c. Morpholine
 - d. Hydrazine
 - e. Resins
6. Reagents
 - a. Those reagents used in performance of analyses required by Technical Specifications.



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TABLE C.1
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MECHANICAL SYSTEMS AND COMPONENTS CLASSIFICATION LIST

COMPONENT	<u>SAFETY CLASS</u>
<u>Reactor Coolant System</u>	
Reactor Vessel	1
Full Length Control Rod Drive Mechanism Housing	1
Part Length Control Rod Drive Mechanism Housing	1
Steam Generator (tube side)	1
(shell side)	2
Pressurizer	1
Reactor Coolant Piping, Fittings, and Fabrication	1
Surge Pipe, Fittings and Fabrication	1
Safety Valves	1
Relief Valves	1
Valves to Reactor Coolant System Boundary	1
Reactor Coolant Pump Casting	1
Main Flange	1
<u>Feedwater System</u>	
Auxiliary Feedwater Pumps	3
Demineralized Water Storage Tank	3
Feedwater Piping (inside containment and outside containment to feed REG Isolation Valve)	2
<u>Service Water System</u>	
Service Water Pumps	3
Valves and Piping	3
<u>Containment Spray System</u>	



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TABLE C.1
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COMPONENT	<u>SAFETY CLASS</u>
Spray Chemical Addition Tank	2
Containment Spray Pumps	2
<u>Chemical and Volume Control System</u>	
Regenerative Heat Exchanger	2
Letdown Heat Exchanger (tube side)	2
(shell side)	2
Reactor Coolant Purification Demineralizers	2
Reactor Coolant Filter	2
Charging Pumps Centrifugal	2
Auxiliary Charging Pump	2
Seal Water Supply Filters	2
Seal Water Return Filter	2
Seal Water Heat Exchanger (tube side)	3
(shell side)	3
Boric Acid Storage Tank	3
Boric Acid Transfer Pumps	3
Boric Acid Filter	3
Boric Acid Mix Tank	3
Volume Control Tank	2
Letdown Flow Control Valves	2
<u>Safety Injection System</u>	
Refueling Water Storage Tank	2
Safety Injection Tanks	2
Low Pressure Safety Injection Pumps	2
<u>Residual Heat Removal System</u>	
Residual Heat Exchangers (tube side)	2
(shell side)	3
<u>Radioactive Gaseous Waste System</u>	



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TABLE C.1
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COMPONENT	SAFETY CLASS
Waste Gas Compressor	3
Waste Gas Surge Tank	3
Gas Decay Drums	3
<u>Component Cooling Water System</u>	
Component Cooling Water Pump	3
Component Cooling Water Surge Tank	3
Component Cooling Water Heat Exchangers	3
<u>Main Steam System</u>	
Main Steam Piping (from Steam Generator up to and including non-return valves)	2
Safety Valves	2
Atmospheric Dump Valve	2
<u>Steam Generator Blowdown System</u>	
Piping (up to and including isolation valve)	2
<u>Emergency Diesel Generator System</u>	
Diesel Fuel Day Tank	3
Diesel Generator Air Tanks	3
Diesel Engines	3
<u>Starting Air System</u>	
Air Tanks	3
Piping and Fittings	3
Valves	3
Filters	3



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TABLE C.1
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COMPONENT	<u>SAFETY CLASS</u>
<u>Spent Fuel Pool Cooling and Cleanup System</u>	
Spent Fuel Pool Pump	3
Spent Fuel Pool Heat Exchanger	3
Spent Fuel Pool Cooling Loop Valves	3
Spent Fuel Pool Cooling Loop Piping	3
<u>Handling Equipment for Fuel and Reactor Vessel Internals</u>	
Fuel Transfer Tube Outer Sleeve	2
Expansion Joints	2
Fuel Transfer Tube and Flange	2
<u>Equipment and Floor Drainage System</u>	
High Pressure Drain Cooler	2
Primary Drain Tank	3
Primary Drains Degasifier	3
Primary Drain Pumps	3